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Pamphlet 70–3

Research, Development, and Acquisition

Army Acquisition Procedures

Headquarters
Department of the Army
Washington, DC
15 July 1999

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Department of the Army
Washington, DC
15 July 1999

***Department of the Army**
Pamphlet 70-3

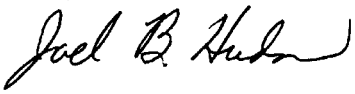
Research, Development, and Acquisition

Army Acquisition Procedures

By Order of the Secretary of the Army:

ERIC K. SHINSEKI
General, United States Army
Chief of Staff

Official:



JOEL B. HUDSON
Administrative Assistant to the
Secretary of the Army

History. This publishing constitutes a major revision to DA Pam 70-3. Because the publication has changed extensively, the revised portions are not highlighted.

Summary. This pamphlet provides discretionary guidance on materiel acquisition management. It contains information relevant to research, development, and acquisition, and Life Cycle Management (LCM) of Army materiel to satisfy approved Army requirements. The pamphlet applies to major systems, non-major systems, highly sensitive classified acquisition programs, automated information systems, and clothing and individual equipment (CIE). Guidance concerning Acquisition Category (ACAT) III and IV programs contained within the pamphlet can be tailored. Such changes should be the result of discussions between the Product Manager/Materiel Developer and the Milestone Decision Authority (MDA). The pamphlet also contains information pertaining to the Army Acquisition Workforce. In the case of conflicting guidance, AR 70-1 takes precedence over the discretionary information contained in this pamphlet.

Applicability. This pamphlet has application to the Active Army, the Army National Guard, and the US Army Reserve. References to Army Acquisition Workforce management apply to all Department of Army Civilians, Active Army, and Army National Guard.

Proponent and exception authority. The proponents of this regulation are the Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA(ALT)), the Army's Chief Information Officer (CIO)/Director of Information Systems for Command, Control, Communications, and Computers (DISC4), and the Assistant Secretary of the Army for Installations and Environment (ASA(IE)). The ASA(ALT), CIO/DISC4, and ASA(IE) have the authority to supplement the guidance in this pamphlet within their areas of responsibility, consistent with controlling law and regulation; they may delegate this authority to a division chief (minimum grade of colonel or civilian equivalent) within the proponent agencies.

Suggested improvements. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to Director, Acquisition Policy (SAAL-RP), Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 2511 Jefferson Davis Highway (Suite 10036), Arlington, VA 22202-3911.

Distribution. This publication is available in electronic media only and is intended for command level D for Active Army and Army National Guard of the United States.

Supersession. This pamphlet supersedes DA Pam 70-3, 28 February 1995.

Table of Contents

INTRODUCTION **12**

Part 1 ..... **13**

Acquisition Management Process **13**

1.1 Purpose 13

1.2 Overview of the Acquisition Management Process 13

1.3 Categories of Acquisition Programs and Milestone Decision Authorities 13

1.3.1 Acquisition Category (ACAT I) 13

1.3.1.1 Delegation of Milestone Decision Authority for ACAT I Programs 14

1.3.2 ACAT IA 14

*1.3.3 ACATII 14

1.3.4 ACAT III 14

1.3.5 ACAT IV (This paragraph not present in DoD 5000.2-R.) 14

1.4 Acquisition Phases and Accomplishments 14

1.4.1 Determining Mission Needs and Identifying Deficiencies 14

1.4.2 Phase 0: Concept Exploration 16

1.4.3 Phase I: Program Definition and Risk Reduction 16

1.4.4 Phase II: Engineering and Manufacturing Development 16

**1.4.4.1 Low Rate Initial Production (LRIP) 16

1.4.5 Phase III: Production, Fielding/Deployment, and Operational Support 16

1.4.5.1 Operational Support 17

1.4.5.2 Modifications 17

1.4.6 Demilitarization and Disposal 23

1.5 Milestone Decision Points 23

1.5.1 Milestone 0: Approval to Conduct Concept Studies 24

1.5.2 Milestone I: Approval to Begin A New Acquisition Program 24

1.5.3 Milestone II: Approval to Enter Engineering and Manufacturing Development 24

1.5.3.1 Approval to Enter LRIP 24

1.5.4 ~~Milestone III: Production or Fielding/Deployment Approval~~ (Type Classification Procedures) 24

1.6 Integrated Product Teams 37

Part 2 ..... **38**

Program Definition **38**

2.1 Purpose 38

***2.2 Intelligence Support 38

2.2.1 Evaluation of Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) Support 38

* The information contained in the corresponding paragraphs of DoD 5000.2-R are not applicable to ACAT IA programs.

** LRIP is not applicable to ACAT IA programs; however, a limited deployment phase may be. (Per DoD 5000.2-R.)

*** This paragraph is normally not applicable to ACAT IA programs. (Per 5000.2-R.)

2.3 Requirements Evolution 38
2.3.1 Evaluation of Requirements Based on Commercial Market Potential 38
2.3.2 Strategic Requirements Consideration 38
2.3.3 ORD to RFP Crosswalk (This paragraph is not present in DoD 5000.2-R.) 38
2.4 Analysis of Alternatives (AoAs) 39
2.4.1 Preparation Responsibilities 40
2.4.2 Milestone Decision Reviews 40
2.5 Affordability 40
2.5.1 Full Funding of Acquisition Programs Reviewed by the Defense Acquisition Board (DAB) or Information Technology Overarching Integrated Product Team (IT OIPT) 41
2.6 Supportability 41
2.7 ~~Advanced Concept Technology Demonstrations (ACTDs)~~ (Science and Technology Development, Demonstration, and Transition Information) 41
Part 3 59
Program Structure 59
3.1 Purpose 59
3.2 Program Goals 59
3.2.1 Objectives and Thresholds 59
3.2.2 Acquisition Program Baselines (APBs) 59
3.2.2.1 Preparation and Approval 60
3.2.2.2 APB Content 60
3.2.3 Exit Criteria 60
3.3 Acquisition Strategy (AS) 60
3.3.1 Open Systems 60
3.3.2 Sources 60
3.3.2.1 Commercial and Non-Developmental Items 60
3.3.2.2 Dual Use Technologies and Use of Commercial Plants 61
3.3.2.3 Industrial Capability 61
3.3.2.4 Critical Product and Technology Competition 61
3.3.2.5 Leasing 61
3.3.2.6 Market Research (This paragraph is not present in DoD 5000.2-R.) 61
3.3.3 Cost, Schedule, and Performance Risk Management 62
3.3.4 Cost as an Independent Variable (CAIV) 62
3.3.4.1 Cost/Performance Tradeoffs 63
3.3.4.2 Cost Management Incentives 65
3.3.5 Contract Approach 65
3.3.5.1 Competition 65
3.3.5.2 Best Practices 65
3.3.5.3 Cost Performance 66
3.3.5.3.1 Integrated Baseline Reviews 66

*3.3.5.4 Advance Procurement 66
3.3.5.5 Continuous Acquisition and Life-Cycle Support (CALS)—Acquisition Program Integrated Digital Environment (IDE) 66
3.3.6 Management Approach 67
3.3.6.1 Streamlining 67
***3.3.6.2 International Considerations 67
3.3.6.3 Joint Program Management 68
3.3.6.4 Assignment of Program Executive Responsibility 68
3.3.6.5 Technical Representatives at Contractor Facilities 69
3.3.6.6 Information Sharing and DoD Oversight 69
3.3.7 Environmental, Safety, and Health Considerations 69
3.3.8 Sources of Support 70
*3.3.9 Warranties 70
3.3.10 Corrosion Prevention and Control (CPC) (This paragraph is not present in DoD 5000.2-R.) 70
3.3.11 Explosive Ordnance Disposal (EOD) (This paragraph is not present in DoD 5000.2-R.) 71
3.3.12 Modeling and Simulation (This paragraph is not present in DoD 5000.2-R.) 71
3.4 Test and Evaluation 72
3.4.1 Test and Evaluation Strategy 72
3.4.2 Developmental Test and Evaluation 73
3.4.3 Certification of Readiness for Operational Test and Evaluation 73
3.4.4 Modeling and Simulation 73
3.4.5 Operational Test and Evaluation 74
3.4.6 Operational Test and Evaluation Plans 74
3.4.7 Use of System Contractors in Support of Operational Test and Evaluation 75
*3.4.8 Production Qualification Test and Evaluation 75
*3.4.9 Live Fire Test and Evaluation 75
3.4.10 Foreign Comparative Test (FCT) 75
3.4.11 Test and Evaluation Master Plan 75
3.4.12 Joint Test and Evaluation (JT&E) Program (This paragraph is not present in DoD 5000.2-R.) 75
3.5 Life-Cycle Resource Estimates 76
3.5.1 Life-Cycle Cost Estimates 76
*3.5.2 Manpower Estimates 78
3.6 Program Plans 79
Part 4 80
Program Design 80
4.1 Purpose 80
4.2 Integrated Product and Process Development 80

* The information contained in the corresponding paragraphs of DoD 5000.2-R are not applicable to ACAT IA programs.

*** This paragraph is normally not applicable to ACAT IA programs. (Per 5000.2-R.)

4.3 Systems Engineering 80
*4.3.1 Manufacturing and Production 82
4.3.2 Quality 84
4.3.3 Acquisition Logistics (and Integrated Logistics Support (ILS)) (This section combines information pertinent to paragraphs 4.3.3 through 4.3.3.4 of DoD 5000.2-R.) 87
4.3.3.1 General 88
4.3.3.2 Procedures 89
4.3.4 Open Systems Design 94
4.3.5 Software Engineering 95
4.3.6 Reliability, Maintainability and Availability 99
4.3.7 Environment, Safety, and Health (This section combines information pertinent to paragraphs 4.3.7.1 through 4.3.7.5 of DoD 5000.2-R.) 105
4.3.8 Human Systems Integration (HSI) 109
4.3.8.1 Manpower and Personnel Integration (MANPRINT) (This paragraph is not present in DoD 5000.2-R.) 109
4.3.8.2 Human Factors Engineering (This paragraph is not present in DoD 5000.2-R.) 110
4.3.9 Interoperability 112
4.3.10 Configuration Management (This paragraph is not present in DoD 5000.2-R.) 113
4.3.11 Technical Data Management (This paragraph is not present in DoD 5000.2-R.) 114
4.3.12 Corrosion Prevention and Control (CPC) (This paragraph not present in DoD 5000.2-R.) 117
4.3.13 Explosive Ordnance Disposal (EOD) (This paragraph not present in DoD 5000.2-R.) 119
4.4 Other Design Considerations 120
4.4.1 Survivability 120
4.4.2 Work Breakdown Structure 124
4.4.3 Standardization Documentation (and Performance Specifications) 125
4.4.4 Metric System 127
4.4.5 Program Protection 127
4.4.6 Information Assurance 130
4.4.7 Electromagnetic Environmental Effects (E3) and Spectrum Management 130
*4.4.8 Unplanned Stimuli 134
4.4.9 Value Engineering 135
4.4.10 Vertical Integration 136
4.4.11 Special Coordination (This paragraph not present in DoD 5000.2-R.) 136
Part 5 139
Program Assessments & Decision Reviews 139

* The information contained in the corresponding paragraphs of DoD 5000.2-R are not applicable to ACAT IA programs.

5.1 Purpose 139
5.2 Defense Acquisition Board 140
5.2.1 DAB Readiness Meeting 140
5.2.2 Army Systems Acquisition Review Council (This paragraph is not present in DoD 5000.2-R.) 140
5.2.3 Warfighter Rapid Acquisition Program (WRAP) ASARC (This paragraph is not present in DoD 5000.2-R.) 140
5.2.4 Fast Track ASARC (This paragraph is not present in DoD 5000.2-R.) 140
5.3 Reserved 141
5.4 Integrated Product Teams in the Oversight and Review Process 141
5.4.1 Overarching IPT Procedures and Assessments 141
5.4.2 Working-Level IPTs Procedures, Roles, and Responsibilities 141
5.5 Joint Requirements Oversight Council Review Procedures 141
*5.6 Cost Analysis Improvement Group Procedures 141
5.7 Other Boards and Councils 146
5.8 Program Information 146
Part 6 150
Periodic Reporting 150
6.1 Purpose 150
6.2 Cost, Schedule, and Performance Program Reports 150
6.2.1 Acquisition Program Baseline (APB) Reporting 150
6.2.1.1 Program Deviations 150
*6.2.2 Defense Acquisition Executive Summary (DAES) (DD-ACQ(Q) 1429) 150
6.2.2.1 DAES Reportable Designations 150
6.2.2.2 Out-of-Cycle DAES Reports 150
6.2.2.3 Consistency of Information with Other Documents and/or Reports 150
****6.2.3 Major Automated Information System Quarterly Report DD-C3I(Q) 1799 150
*6.2.4 Selected Acquisition Reports (SAR) DD-COMP (Q&A) 823 150
6.2.4.1 SAR Content and Submission 150
6.2.4.2 SAR Waivers 150
6.2.4.3 SAR Termination 150
*6.2.5 Unit Cost Reports (UCR) COMP (Q&AR) 1591 150
6.2.5.1 Unit Cost Content and Submission 151
6.2.5.2 UCR Breaches 151
6.2.6 Annual T&E Oversight List 151
*6.2.7 Assessing Program Performance for ACAT I Programs 151
6.3 Test and Evaluation Reports 151
6.3.1 DoD Component Reporting of Test Results 151

* The information contained in the corresponding paragraphs of DoD 5000.2-R are not applicable to ACAT IA programs.

**** The information contained in the corresponding paragraph of DoD 500.2-R is not applicable to ACAT I programs.

*6.3.2 Live Fire Test and Evaluation Report....151
*6.3.3 Beyond Low-Rate Initial Production Report....151
*6.3.4 Foreign Comparative Test Notifications and Reports to Congress....151
6.3.5 Electronic Warfare (EW) Test and Evaluation Reports....151
*6.3.6 Annual Operational Test and Evaluation Reports....151
6.4 Contract Management Reports....151
*6.4.1 Contractor Cost Data Reporting (CCDR)....151
6.4.2 Cost Performance Report (CPR) DID DI-MGMT-81466 (DoD 5010.12-L)....152
6.4.3 Cost/Schedule Status Report (C/SSR) DID DI-MGMT-81467 (DoD 5010.12-L)....152
6.4.4 Contract Funds Status Report (CFSR) DI-MGMT-81468 (DoD 5010.12-L)....152
6.4.5 Cooperative R&D Projects Report....152
Part 7....153
Career Management for Army Acquisition Corps and Acquisition Workforce Members....153
(This Part not present in DoD 5000.2-R.)....**153**
7.1 Acquisition Career Management....153
7.2 Acquisition Workforce....154
7.2.1 Acquisition Career Fields (ACFs) and Acquisition Position Categories (APCs)....154
7.2.2 Acquisition Career Field Certification....155
7.2.3 Alternate Training Methods....156
7.2.4 Army Acquisition Corps....156
7.2.5 Acquisition Corps Membership....156
7.2.6 Central Selection Boards....159
7.2.7 Central Management....159
7.2.8 Career Management Individual Files....160
7.2.9 Senior Rater Potential Evaluation (SRPE)....160
7.3 Career Development as a Mission....160
7.3.1 Individual Development Plan (IDP)....160
7.3.2 Quality Achievement Factors and the Civilian Acquisition Career Model....161
7.3.3 Army Civilian Training Education and Development Systems (ACTEDS) Plan....161
7.3.4. Military Leader Development Model....163
7.3.5 Rotational Review....163
7.4 Acquisition Education and Training....163
7.4.1 Education....163
7.4.2 Training....164
7.4.3. Developmental Activities and Programs....164
7.5 Other Information Sources....165

* The information contained in the corresponding paragraphs of DoD 5000.2-R are not applicable to ACAT IA programs.

Appendix A **167**
References **167**
Section I Required Publications *167*
Section II Related Publications *167*
Section III Prescribed Forms *179*
Section IV Referenced Forms *179*
Appendix I **180**
Consolidated Acquisition Reporting System Mandatory Procedures and Formats **180**
Appendix II **181**
Operational Requirements Document Mandatory Procedures and Formats **181**
Appendix III **182**
Test and Evaluation Master Plan Mandatory Procedures and Format **182**
Appendix IV **183**
Live Fire Test and Evaluation Reports Mandatory Procedures & Reports **183**
Appendix V **184**
Major Automated Information System Quarterly Reporting Mandatory Procedures and Formats **184**
Appendix VI **185**
Earned Value Management Systems Criteria Mandatory Procedures and Reporting **185**
*****Appendix VII** **186**
Guidelines For Army Acquisition Reform Strategic Planning **186**
Appendix VIII **190**
Establishing Program/Project/Product Management Offices **190**
Appendix IX **196**
Transitioning Systems From PM Centralized Management to Functional Management **196**
Appendix X **200**
Disestablishing Program/Project/Product Management Offices **200**
Appendix XI **204**
Terminating A Program **204**
Appendix XII **208**
Assigning Popular Names **208**
Appendix XIII **211**
Chief Information Officer Assessment Requirements **211**
Appendix XIV **238**
The Clothing and Individual Equipment (CIE) Life Cycle Process **238**
Appendix XV **246**
Management of PM Owned Wholesale Stock **246**
Appendix XVI **248**
Materiel Status Record **248**
Appendix XVII **250**
DoD Parts Control Program **250**

***** Appendixes VII through XXVII are not included in DoD 5000.2-R

Appendix XVIII **251**
Unsolicited Proposals **251**
Appendix XIX **260**
Transportability **260**
Appendix XX **265**
Horizontal Technology Integration (HTI) **265**
Appendix XXI **273**
Warfighter Rapid Acquisition Program (WRAP) **273**
Appendix XXII **277**
Fast Track Acquisition Program **277**
Appendix XXIII **282**
Program/Project/Product Management and Acquisition Command Decorations, Awards, and Honors **282**
Appendix XXIV **285**
Preparation Guide for ASARC/IT OIPT Acquisition Program Reviews **285**
Appendix XXV **320**
Insensitive Munitions/Unplanned Stimuli **320**
Appendix XXVI **339**
Simulation Support Plan Planning Methodology **339**
Appendix XXVII **341**
Competitive Development Group Program **341**
Appendix XXVIII **350**
Glossary **350**

List of Tables

Table 2-1. Sample Format for ORD to RFP Crosswalk 39
Table 2-2 ATD Nomination and ATD Management Matrix 51
Table 7-1. Acquisition Career Fields and Acquisition Position Categories 154
Table 7-2 Acquisition Career Level 155
Table 7-3 Acquisition Corps Quality Achievement Factors Guide for Career Planning 162
Table XXIV-1 ASARC Membership 286
Table XXIV-1.a IT OIPT Membership 287
Table XXIV-2 ASARC/IT OIPT Membership 289
Table XXIV-3 ASARC/IT OIPT Membership Interest Areas 293
Table XXIV-4 Typical ASARC/IT WIPT Structure 294
Table XXIV-5 Sample Review Major Events Schedule for ACAT IC and II Systems 300
Table XXIV-6 Sample Review Major Events Schedule for ACAT ID Programs 300
Table XXIV-7a Examples of Oversight Documents 305
Table XXIV-7b Examples of Supporting Documents 306
Table XXIV-7c. Examples of Congressional/DAB Oversight Documents (Statutory, Regulatory) 307
Table XXIV-7d Examples of Program Specific Documents (Not Required by Every Program) 307
Table XXIV-7e Included in Other Documents 307
Table XXIV-8 Typical Final ASARC/IT OIPT Meeting Agenda 311

Table XXIV-9 Typical MILDEP Review Agenda 312
Table XXIV-10 Typical Agenda for ASARC/IT OIPT Reviews..... 313
Table XXIV-11 Suggested Planning Guide for a Successful Milestone Review 317
Table XXVII-1 Acquisition Corps Quality Achievement Factors Guide for Career Planning..... 343

List of Figures

Figure 1- 1. Acquisition Management Model..... 13
Figure 1-2. Analysis in the Materiel Requirements Determination Process..... 15
Figure 1-3. Sample Format for Safety and Health Data Sheet..... 26
Figure 1-4. Sample Format for Type Classification Recommendation..... 30
Figure 1-5. Sample Format for User Evaluation Statement..... 34
Figure 2-1. ASTAG and ASTWG Membership..... 43
Figure 2-2. SRO Process..... 44
Figure 2-3. ATD Process..... 46
Figure 2-4. ATD Nomination and ATD Management Plan Process..... 47
Figure 2-5. ATD Nomination and ATD Management Plan Format..... 47
Figure 2-6. Format for Simulation Support Plan..... 52
Figure 2-7. Army ACTD Nomination Process..... 54
Figure 2-8. Format for Army ACTD Nomination..... 55
Figure 2-9. DUST Process..... 56
Figure 2-10. ACT II Process..... 57
Figure 2-11. Army SBIR Process..... 58
Figure 4-1. Document Summary List..... 118
Figure 5-1. Membership Of The Cost/CRB IPT..... 143
Figure 5-2. The ACP Process..... 144
Figure 5-3. Options for ACAT ID Programs..... 145
Figure 5-4. Issue Resolution Process..... 146
Figure 5-5. Core Acquisition Issues For Consideration During Modified Integrated Program Summary (MIPS) Preparation..... 148
Figure 7-1. AAC Membership Requirements..... 157
Figure 7-2. Exceptions To Acquisition Corps Requirements..... 158
Figure 7-3—Civilian Acquisition Career Model..... 163
Figure VIII-1. Sample Format for the Program/Project/Product Manager Selection Criteria..... 193
Figure VIII-2. Sample Format for the Program Summary Sheet..... 194
Figure VIII-3. Program Information Supporting Requests to Establish a Program/Project/Product Manager..... 195
Figure IX-1. Sample Format for Program Transition Plan..... 198
Figure X-1. Sample Format Disestablishing Program/Project/Product Management Offices..... 202
Figure XI-1. Sample Format Program Termination Plan..... 206
Figure XII-1. Sample Format for Requesting A Popular Name..... 210
Figure XVI-1. Sample Format for Materiel Status Record Submission..... 249
Figure XVIII-1. Detailed Guide for the Unsolicited Proposal Coordinator..... 255
Figure XVIII-2. Detailed Guide for the Unsolicited Proposal Evaluator..... 256
Figure XVIII-3. Guidance to Preparers of Unsolicited Proposals..... 257

Figure XX- 1. Primary HQDA HTI Organizations 266
Figure XX- 2. Initial Evaluation 268
Figure XX- 3. Initiative Proposals 269
Figure XX- 4. Program Proposals 270
Figure XX- 5. The Complete Evaluation Process 271
Figure XXI-1. WRAP ASARC Membership 275
Figure XXIII-1. Sample Nomination Format for PM Awards 283
Figure XXIII-2. Format for Acquisition Command Awards 284
Figure XXIV-1. IPT Operating Principles 288
Figure XXIV-2. Army IPT Structure for ASARC/IT OIPT Reviews 290
Figure XXIV-3. Sample ASARC/IT OIPT IPT Operating Guidelines 291
Figure XXIV-4. Issue Resolution Process 291
Figure XXIV-5. DASC/PM Coordination Role in the IPT Process 296
Figure XXIV-6. Cost Review and Approval Process Flow 298
Figure XXIV-7. Typical ASARC/DAB Preparation Timeline 299
Figure XXIV-8. Acquisition Milestone Documentation Process 302
Figure XXIV-9. Typical Categorical Relationships of Program Documentation 304
Figure XXIV-10. Notional DAB/OSD IT OIPT Decision Document 310
Figure XXV-1. IM Technical Approach 321
Figure XXV-2. IM for New Acquisitions 322
Figure XXV-3. IM Process for New Munition System Development 324
Figure XXV-4. IM CaNDI/PIP Development 327
Figure XXV-5. IM Waiver Process 329
Figure XXV-A1 Insensitive Munitions Test Results Format 332
Figure XXV-A2 Insensitive Munitions Schedule/Milestones 333
Figure XXV-A3 Insensitive Munitions Implementation Plan for Technology Transfer 334
Figure XXVII-1. Civilian Acquisition Career Model 344

INTRODUCTION

General Introduction. The Department of Defense has been publishing its capstone acquisition Directive 5000.1 and Instruction 5000.2 since 1971. In 1991 these documents were significantly rewritten to formalize acquisition management policies. In order to assist the Department of the Army acquisition community implements the DOD direction, DA Pamphlet 70-3 was first published in 1995. The pamphlet is being rewritten at this time to bring it in line with the 1996 and 1997 revisions to the DOD documents. The fundamental purpose of this version of DA PAM 70-3 remains the same: provide advisory guidance on the materiel acquisition life cycle.

Points of contact and appropriate references are listed with the applicable section or appendix. There are four common references for the entire pamphlet. They are:

1. DOD Directive 5000.1, "Defense Acquisition," March 15, 1996; accessible through the Defense Acquisition Deskbook (DAD) and on the Internet at:

http://www.acq.osd.mil/api/asm/product.html.

2. DOD Regulation 5000.2-R, "Mandatory Procedures for Major Defense Acquisition Programs (MDAPs) and Major Automated Information System (MAIS) Acquisition Programs," March 23, 1998; accessible through the Defense Acquisition Deskbook (DAD) and on the Internet at: http://www.acq.osd.mil/api/asm/product.html.

3. Defense Acquisition Deskbook; accessible on the Internet at: http://www.deskbook.osd.mil/.

4. AR 70-1, "Army Acquisition Policy," December 15, 1997, available on the Internet at: http://www.usapa.army.mil/gils/.

Direct Reporting Program Managers (DRPMs) should consider all actions listed for Program Executive Officers (PEOs) to be applicable to them as well.

Several forms and suggested formats for acquisition reports are contained in the pamphlet. Disposition instructions should follow the guidelines established by the Modern Army Record Keeping System (MARKS). (AR 25-400-2)

Table of Contents. This document serves as a companion to DODD 5000.1 and DOD 5000.2-R. It is aligned with DOD 5000.2-R for easy cross-reference. The Pamphlet is organized into seven major Parts:

1. Acquisition Management Process
2. Program Definition
3. Program Structure
4. Program Design
5. Program Assessments and Decision Reviews
6. Periodic Reporting
7. Career Management for Army Acquisition Corps and Acquisition Workforce Members (This Part is not present in DOD 5000.2-R)

Note: Paragraph listings without follow-on information signifies that the information contained in DOD 5000.2-R is sufficient and is not supplemented for Army acquisition.

Part 1
Acquisition Management Process

1.1 Purpose

Point of Contact: Director, Acquisition Policy (SAAL-RP), Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 2511 Jefferson Davis Highway, Arlington, VA 22202-3911

1.2 Overview of the Acquisition Management Process

Point of Contact: Director, Acquisition Policy (SAAL-RP), Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 2511 Jefferson Davis Highway, Arlington, VA 22202-3911

The acquisition process is designed to provide a needed capability to the warfighter in the shortest practical time and concurrently reducing risk, ensuring affordability, and providing adequate information for decision-making. Figure 1-1 depicts the major phases and milestones of the acquisition management process. A logical structure of cost, performance, and schedule objectives mutually agreed to by the Program Manager (PM) and the Milestone Decision Authority (MDA) is key to the success of any acquisition program.

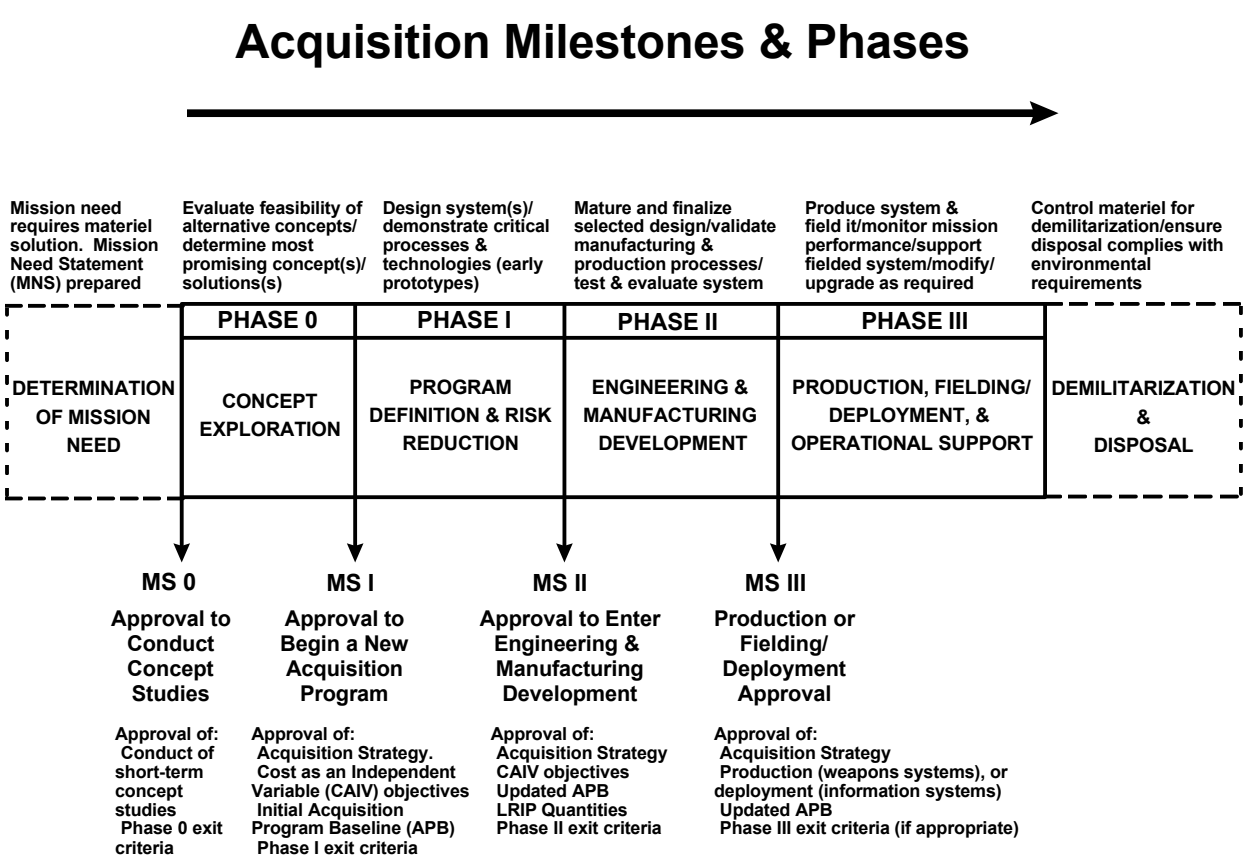


Figure 1- 1. Acquisition Management Model

1.3 Categories of Acquisition Programs and Milestone Decision Authorities

Point of Contact: Director, Acquisition Policy (SAAL-RP), Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 2511 Jefferson Davis Highway, Arlington, VA 22202-3911

1.3.1 Acquisition Category (ACAT I)

Point of Contact is the same as paragraph 1.3.

1.3.1.1 Delegation of Milestone Decision Authority for ACAT I Programs

Point of Contact: Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 103 Army Pentagon, ATTN: SAAL-ZD, Washington, DC 20310-0103

1.3.2 ACAT IA

Point of Contact is the same as paragraph 1.3.

1.3.3 ACATII*

Point of Contact is the same as paragraph 1.3.

* Information contained in corresponding paragraph of DoD 5000.2-R is not applicable to ACAT IA programs.

1.3.4 ACAT III

Point of Contact is the same as paragraph 1.3.

ACAT III system managers and decision authorities tailor documentation and decision points to the needs of individual programs.

1.3.5 ACAT IV (This paragraph not present in DoD 5000.2-R.)

Point of Contact is the same as paragraph 1.3.

Army ACAT IV programs are characterized as non-major programs managed by a system manager within a materiel command rather than by a PM. ACAT IV programs follow the same general acquisition guidelines as ACAT III programs, but the program decision authority is the commander of a materiel command (or appointed designee) at each milestone review. ACAT IV system managers and decision authorities tailor documentation and decision points to the needs of individual programs.

1.4 Acquisition Phases and Accomplishments

Point of Contact: Director, Acquisition Policy (SAAL-RP), Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 2511 Jefferson Davis Highway, Arlington, VA 22202-3911

1.4.1 Determining Mission Needs and Identifying Deficiencies

Points of contact:
HQDA, Deputy Chief of Staff for Operations and Plans, ATTN: DAMO-FDJ, 400 Army Pentagon, Washington, DC 20310-0400
HQDA, Deputy Chief of Staff for Operations and Plans, ATTN: DAMO-ZDS, 400 Army Pentagon, Washington, DC 20310-0400

References:
CJCSI 3170.01 (Formally MOP 77), “Requirement Generation System Policies and Procedures.”
AR 71-9, “Materiel Requirements.”
TRADOC Pam 71-9, “Requirements Determination.”

Requirements determination is a continual process through which the Army defines its requirements necessary to upgrade and change the way it fights and operates to maintain battlefield superiority over all potential adversaries and achieve complementary capabilities with other services and nations. Requirements developed through the process span all domains of Doctrine, Training, Leader development, Organization, Materiel, and Soldier (DTLOMS). The process involves establishing the Capstone and associated Operational, Functional and Branch warfighting concepts; defining and integrating Future Operational Capabilities (FOCs); determining DTLOMS solutions for the FOCs; and finally defining and documenting the operational requirements for each DTLOMS solution.

Requirements determination activities during the Determining Mission Needs phase include determining DTLOMS solutions to FOCs and, when applicable, prepare, process, and approve a Mission Need Statement (MNS) for materiel solutions. A Capstone Requirement Document (CRD) may be used for a “system of systems” approach. The CRD is a requirements management document that sets common standards and requirements across a function or mission area. It ensures any materiel fielded within that function or mission area is interoperable and maximizes the use of common resources. A CRD cannot be used to establish a materiel acquisition program or funding line. Authority for these activities is the individual system ORD.

The solution determination effort proceeds in the order of D-T-L-O-S-M, reflecting consideration of quickest, least cost solution (doctrine) to the slowest, most expensive solution (materiel). DTLOS domains must be

eliminated as providing a viable solution before proceeding with a materiel solution. This process of mission needs analysis constitutes Business Process Reengineering Analysis (BPRA) for materiel requirements and documented in the MNS when produced and Operational Requirements Document (ORD) when no MNS is produced. In the Army, MNS are normally developed for programs meeting ACAT I or IA criteria, programs constituting new Army missions, and programs with significant leap ahead technologies. MNS are rarely developed for ACAT II through IV programs. The approved Integrated Concept Team (ICT) results or other approved Army planning documents document the need and will suffice to support Program Objective Memorandum (POM) programming. Completion of this phase, with approved recognition of a materiel solution for the FOC, is the beginning of the materiel requirement determination process resulting in an initial ORD at Milestone I and firm ORD at Milestone II as depicted in Figure 1-2. In actual operations, the process is tailored to the needs of a program and phases combined.

Within any one-materiel concept, several technologies may meet or exceed the required operational capability. The Materiel Development (MATDEV) community performs analysis to discriminate among the multitude of potential concepts to avoid dilution of the research dollar. Agencies such as Army Research Organization (ARO) and Army Research Lab (ARL) identify new technologies to meet mission needs. Other MATDEV agencies such as the Research, Development and Engineering Centers (RDECs) can identify current technology that can be integrated into a system to meet the FOC. Life Cycle Software Engineering Centers (LCSECs) can assist the PM in identifying where current software technology or reusable existing software can provide improved capabilities and/or more cost-effective solutions. The MATDEV analysis considers potential disciplines. The Army Materiel Systems Analysis Activity (AMSAA) analysis may identify several technological approaches available for further analysis. However, one approach will usually provide the most optimum combination of performance, risk, and/or cost advantages. Finding the key trade-offs can narrow the development focus and save resources.

The analysis from the Army's in-house technological research (Science and Technology Objectives (STOs), Advanced Technology Demonstrations (ATDs), and Advanced Concept Technology Demonstrations (ACTDs)), private industry research and development, and other service research is an integral part of defining alternatives to meet mission needs. This analysis could include identification of military systems and software and commercial of the shelf (COTS) software that provide some or all of the needed capabilities, performance estimates, value added assessments, exit criteria analysis, and unique support to the Training and Doctrine Command (TRADOC) Analysis Center (TRAC) operational analysis. One example of unique support is AMSAAs provision of item level data and performance analysis. TRADOC PAM 71-9 has more information on the STO/ATD/ACTD process.

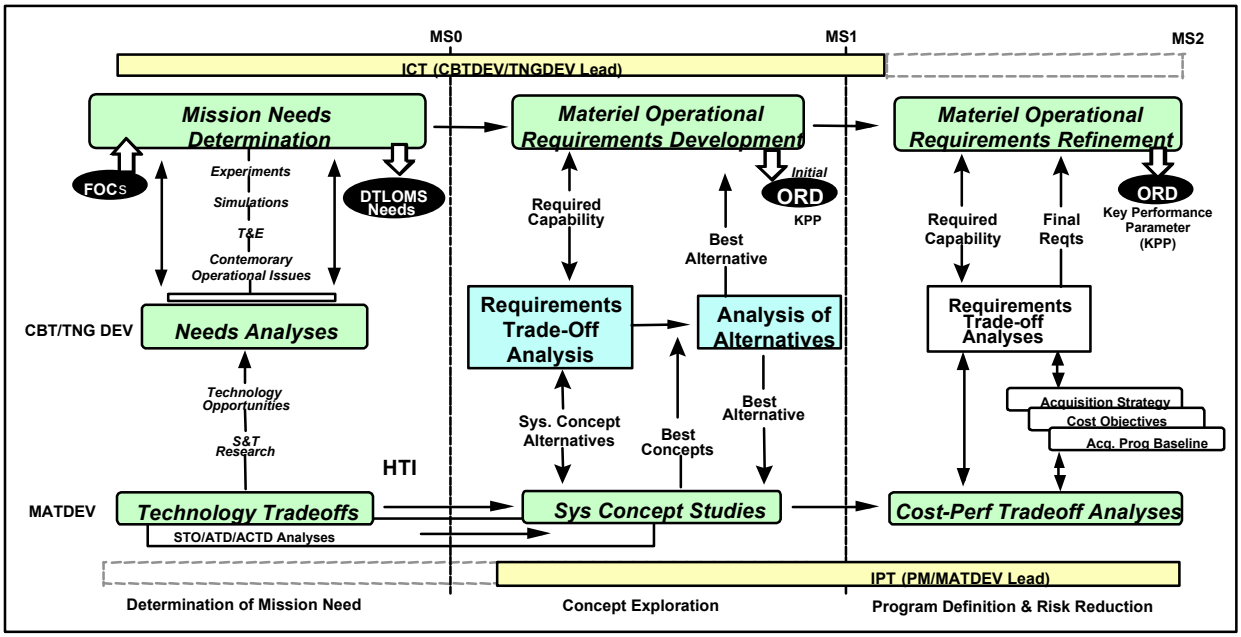


Figure 1-2. Analysis in the Materiel Requirements Determination Process

1.4.2 Phase 0: Concept Exploration

Points of contact: HQDA, Deputy Chief of Staff for Operations and Plans, ATTN: DAMO-ZDS, 400 Army Pentagon, Washington, DC 20310-0400

Reference: AR 5-22, "The Army Proponent System."

After Mission Need Determination and a Milestone 0 (MS 0) decision to proceed with concept exploration, TRADOC and the Army Materiel Command (AMC) conduct analyses to develop the initial ORD, identify system concept alternatives, and provide advice to the MDA at MS I regarding whether a new program is warranted. These analyses are operational analyses, concept studies, and the Analysis of Alternatives (AoA). Key products of these analyses are the operational requirements for the initial ORD and the Acquisition Program Baseline (APB). The requirements trade-offs / operational analyses, concept studies, and AoA provide iterative feedback and input to one another as the program develops.

The combat developer is that command, organizational element (including base operations and HQDA), and individual responsible for preparing and processing the materiel requirement document (MRD) and representing the user (organization and individual) of the new or modified system throughout the acquisition process. Combat developers apply to both materiel systems and information technology systems. Assignments of branch or specified proponent under AR 5-22 (as is the case for commands such as TRADOC, Medical Command (MEDCOM), Space and Missile Defense Command (SMDC), and Intelligence and Security Command (INSCOM)) bring with it combat development responsibilities for deployable and non-deployable materiel and information warfighting systems.

The MATDEV, in coordination with the Combat Developer (CBTDEV) and Training Developer (TNGDEV), performs concept studies on the best technological candidates identified by the technology trade-offs conducted during the Determination of Mission Need phase. These studies develop rough performance estimates and research, development, and acquisition (RDA) cost estimates with sufficient resolution to permit trade-offs among system performance, operational capability, requirements, and costs. Concept studies identify system concept alternatives for the AoA, provide input for development of the program baseline, and influence the ORD through interaction with the CBTDEV requirements analyses.

Concept Studies examine the feasibility of different technology solutions; refine technology concepts; provide performance data for a given technology; identify system engineering trade-off analyses among technologies; analyzes environmental impacts; assess engineering concepts, cost drivers, performance thresholds, and schedule constraints; and identify opportunities for trade-offs among performance, cost, and schedule.

The MATDEV evaluates potential technology solutions for trade-offs in system performance, design specification, software requirements, operational availability factors (reliability and maintainability (R&M)), logistics design, human engineering, and designated critical system characteristics. This analysis identifies the range of materiel possibilities from which to select the system characteristics that best solve the operational need within given cost and program schedule constraints. It establishes bands of performance (range, endurance, and survivability) that the materiel developer can achieve in the time available. It also provides information on the relationships between these factors (for example, operating range versus survivability factors). The analysis investigates functional and technical computer resources and support alternatives and leads to the determination of the most promising computer resources and support concepts.

1.4.3 Phase I: Program Definition and Risk Reduction

Point of Contact: Director, Acquisition Policy (SAAL-RP), Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 2511 Jefferson Davis Highway, Arlington, VA 22202-3911

1.4.4 Phase II: Engineering and Manufacturing Development

Point of Contact: Director, Acquisition Policy (SAAL-RP), Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 2511 Jefferson Davis Highway, Arlington, VA 22202-3911

1.4.4.1 Low Rate Initial Production (LRIP)*

Point of Contact is the same as paragraph 1.4.4.

* LRIP is not applicable to ACAT IA programs; however, a limited deployment phase may be.

1.4.5 Phase III: Production, Fielding/Deployment, and Operational Support

Point of Contact: Director, Acquisition Policy (SAAL-RP), Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 2511 Jefferson Davis Highway, Arlington, VA 22202-3911

1.4.5.1 Operational Support

Point of Contact is the same as paragraph 1.4.5.

A supportability analysis should be conducted to determine the best support concept for the life cycle management of a large weapon system. Program-specific determinations should be made of the best value and risk to the soldier. For software, the Army LCSEC assigned to the command area should be considered as provider of operational support and maintenance services, in a primary, lead, or coordination role, in cooperation with any contracted services from the original developer or any third party.

1.4.5.2 Modifications

Points of contact:

Director, Acquisition Policy (SAAL-RP), Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 2511 Jefferson Davis Highway, Arlington, VA 22202-3911

U.S. Army Materiel Command, ATTN: AMCRD-AR, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001

References:

DoDD 4630.5, “Compatibility, Interoperability and Integration of Command, Control, Communications, and Intelligence (C3I) Systems.”

DoDD 4630.8, “Procedures and Compatibility, Interoperability and Integration of C3I Systems.”

CJCSI 6212.01A, “Technical Architecture Framework for Information Management (TAFIM).”

MIL-STD-973, “Configuration Management.”

MIL-STD-2549, “Configuration Management Standards.”

AR 11-12, “Logistics Priorities.”

AR 11-18, “The Cost and Economic Analysis Program.”

AR 71-9, “Materiel Requirements.”

AR 71-2, “Basis of Issue Plans (BOIP), Qualitative and Quantitative Personnel Requirements Information (QQPRI).”

AR 73-1, “Test and Evaluation Policy.”

AR 95-3, “Aviation: General Provisions, Training, Standardization and Resource Management.”

AR 350-35, “Army Modernization Training.”

AR 350-38, “Training Device Policies and Management.”

AR 385-16, “Systems Safety Engineering and Management.”

AR 602-2, “Manpower and Personnel Integration (MANPRINT) in the System Acquisition Process.”

AR 700-127, “Integrated Logistic Support.”

AR 700-142, “Materiel Release, Fielding and Transfer.”

AR 725-50, “Requisition, Receipt, and Issue System.”

AR 750-6, “Ground Safety Modification System.”

AR 750-10, “Modification of Materiel and Issuing Safety-Of-Use Messages and Commercial Vehicle Safety Recall Campaign Directive.”

DA PAM 73-1, “Test and Evaluation in Support of Systems Acquisition.”

Army Systems Integration and Management Activity (SIMA) Automated Data Systems Users Manual Number ADSM 18-R24-LEI-ZZZ-UM-03, January 14, 1992.

This section provides guidance for initiation, coordination, review and analysis, approval, establishment of priorities, programming and budgeting, reporting and recording of modifications to all Army weapons systems, including hardware and software. These procedures implement policy described in DoD 5000.2-R, AR 70-1 and AR 750-10.

A modification is the alteration, conversion, or modernization of an end item that changes or improves the original purpose or operational capacity in relation to effectiveness, efficiency, reliability or safety of that item. This includes conversions, field fixes, retrofits, remanufacture, redesign, upgrades, extended service programs, engineering changes, software revisions, System Enhancement Program (SEP), Modernization Through Spares (MTS), Service Life Extension Program (SLEP), Product Improvement Program (PIP), Pre-Planned Product Improvement (P3I) and technology insertions. The method to perform modifications to con-

figuration items after that item is accepted into the Army inventory (signed DD Form 250 (Material Inspection and Receiving Report)), is the MWO.

1. A configuration item is an aggregation of hardware, firmware, computer software, or any other discrete portions which satisfies an end use function and which the Government designates for separate configuration management. Any item required for logistics support and designated for separate procurement is a configuration item. Configuration items are normally identified at the major end item level; however, the items may be broken down into piece parts.

2. Approved Engineering Change Proposals (ECP) are modifications applied to the configuration items still on the production line and converted into an MWO for application on fielded equipment.

3. A Modification Work Order (MWO) is the application of modification to configuration items that have been accepted into the Army inventory or no longer in production.

The management level for an approved modification depends on whether the modification requires a change to the type classification of the system/end item to be modified. This level of management is discussed in the “Process to Approve a Modification” section below.

Efforts excluded from these procedures are:

1. Investigation, examination, research, study, review, analysis or evaluation of ideas or suggestions for modifications.

2. Preparation of Engineering Change Proposals (ECPs) and associated documentation.

3. A modification to materiel that is type classified Generic.

4. A modification to materiel for a special purpose or special mission. This type of modification is temporary for a specific duration of time or specific use. In either case, the modified materiel is returned to its original configuration after the special purpose/special mission is accomplished.

5. Repairs to hardware/software/firmware that is under warranty.

6. Maintenance of hardware/software/firmware.

7. National Security Agency and U.S. Army Intelligence and Security Command owned materiel.

8. Research, Development, Test and Evaluation (RDTE) programs that do not result in reconfiguration of operational hardware or software.

The MATDEV prepares the modification portion of the Acquisition Strategy (AS) in coordination with the CBTDEV and the LCSEC (for software dependent systems), consulting authorities established by DoD for ensuring interservice system interoperability where appropriate. The modification portion includes those modifications approved and prioritized by both the Deputy Chief of Staff for Operations and Plans (DCSOPS) and the CBTDEV. The MATDEV and the LCSEC integrates the total modification list. Funding of modifications is provided in accordance with Headquarters, Department of the Army (HQDA) assigned priorities.

The CBTDEV, in coordination with the MATDEV, generates a list of proposed modifications including a recommended priority. For ACAT I and II modifications, the CBTDEV forwards this list to the DCSOPS to validate and establish a priority for the modification. The CBTDEV establishes the priority for ACAT III and IV modifications. This priority represents the urgency of the modification relative to all other modifications for a particular system.

A proposed modification can originate from several sources (U.S. Government, industry or allied country, etc.). The proposed modification could be to technically upgrade the system or for any of the following reasons:

1. Interfacing/interoperability requirements.

2. Compatibility.

3. Correction of deficiency.

4. Operational or logistics support.

5. Production stoppage.

6. Cost reduction.

7. Safety.

8. Value Engineering.

Multi-System Modifications (Including Modifications for Horizontal Technology Integration (HTI) Programs)

1. Definitions.

a. Horizontal Technology Integration (HTI): The application of common technology across multiple systems or items to improve the warfighting capability of the force. It is a modernization, requirements, and acquisition process in which technology is simultaneously integrated into different weapon systems.

b. Host System: A system/end item that includes (but is not limited to) tracked and wheeled vehicles, aircraft, water craft, missiles, ammunition, communications equipment, or medical equipment designated to accept a mounted system/item. The host system program retains configuration control of the single system resulting from the combination of the two (host and mounted) systems. (AR 70-1)

c. Mounted System: A subsystem/end item/component (e.g., a radio, "black box," optical device, common software, etc.) designated to be incorporated into a host/end item. The mounted system program is the office that retains configuration control over its subsystem/end item/component. The mounted system program does not retain configuration control of the single system resulting from the combination of the host and mounted systems. (AR 70-1)

d. Modification Kit: That assemblage of hardware and software necessary to modify the host system to accept the mounted system. The modification kit is a permanent part of the host system and remains with it.

e. Installation Kit: That assemblage of hardware and software that interfaces between the modified host system and the mounted system. The installation kit is intended to be removed from the host system upon disposition. The installation kit is not a permanent part of the host system.

f. Installation Harness. A combination of items such as controls, mounts, amplifiers, cable assemblies, brackets and hardware installed in a host system at a contractor facility prior to issue. The harness is designed for use with a specific host system. It is an integral component of the vehicle and is not removed by the using unit.

2. Requirements definition and approval of multi-system and HTI modifications.

a. The modification requirement for a mounted system in a host system is stated in an approved requirements document of the mounted system. The CBTDEV is responsible for amending the host system requirements document to include the new configuration item.

b. There may be a separate requirements document developed for an HTI mounted system when the complexity of development and integration warrants such action. Under these special conditions, the Army Acquisition Executive in coordination with the Assistant DCSOPS, Force Development may appoint leadership and staffing for a HTI Task Force with a charter to develop the evolutionary requirements definition and a preliminary acquisition strategy for the first milestone decision. The HTI Task Force consists of appropriate membership from the combat and materiel development communities. (See Appendix XX—HTI.)

c. A team approach is essential between the CBTDEV and MATDEV to successfully accomplish HTI efforts. Once HQDA is assured that the complexities of the HTI requirements definition and acquisition strategy are resolved and a clear course is set, HQDA may dissolve the HTI Task Force as an established body, leaving the actual acquisition to the acquisition community.

3. Program Management of multi-system and HTI modifications.

a. One approach is to assign a Mounted System MATDEV to manage the HTI with the Host System MATDEVs retaining the responsibility to integrate the specific technology to their system. In a case where the integration is a complex task and must deal with multiple CBTDEVs and MATDEVs — program oversight may be assigned to a Mounted System MDA while existing Host System MDAs maintain cognizance over the HTI integration effort into their systems via memoranda of agreement.

b. With a multi-system HTI program, the Mounted Systems MATDEV documents the acquisition approach of the HTI in the Modified Integrated Program Summary (MIPS) as part of the AS prior to Milestone I. The AS identifies integration responsibilities, programmatic performance events, and plans to reduce risk. Additionally, the Host System MATDEVs update their AS with required host system specific integration responsibilities. This, combined with a thorough risk assessment, should improve the HTI technical interoperability and system unique configuration control.

c. Some modifications, especially HTIs, may carry significant HQDA and potentially Department of Defense (DoD) oversight. For systems with this level of oversight, Mounted System MATDEVs are expected

to present Host System status along with their routine and regulatory program reviews. Similarly, Host System MATDEVs are expected to present the status of their HTI involvement as part of their program reviews.

Block Modification

A block modification is a grouping of modifications for the purpose of achieving economies in funds, manpower, equipment and/or time to enhance configuration management. A block modification includes several modifications in engineering, procurement and/or application that are managed as a single modification. Block modifications will be accomplished in accordance with contractual requirements and schedule.

Pre-Planned Product Improvement (P3I)

P3I is a planned future evolutionary improvement of developmental systems for which design considerations are accomplished during development to enhance future application of projected technology. Includes improvements planned for ongoing systems that go beyond the current performance envelope to achieve a needed operational capability.

Software Modification

Software for Army weapon systems can be developed during any phase of the acquisition cycle. This pamphlet does not in any way exclude or supersede DoD and Army standards or guidance concerning the development and acquisition of software. Class I Engineering Change Proposals (ECPs) to software should be processed in the same manner as hardware ECPs. Software maintenance is defined as changes typically after production is completed and after responsibility for long-term support has transitioned to a LCSEC; of a nature that would not require modification of the Acquisition Strategy or involvement of the CBTDEV. Care should be taken to ensure that the difference between maintenance actions and modifications is clearly understood, and that all actions are properly classified according to the definitions of maintenance and modifications. Whatever the case, any software modifications affecting joint system interfacing undergoes specified joint reviews (to include those specified by DoD lead services or executive agents). The vehicle to arrive at a new software version is a “Software Release.” A Software Release may have one or many individual changes as described in version document for that release. Updating the current allocated and product baseline provides documentation in support of a software change. If there are to be changes in the software process used to maintain software, as compared to the original development process, the Software Development Plan (SDP) is updated, or a new SDP is generated for the modification effort. A rationale is included citing how the change is cost-effective and/or otherwise beneficial. The modifying organization should give strong consideration to using EIA/IEEE J-STD-016, and also consider the standard(s) used for development, in determining the most cost-effective software process. Conversion to an organization's single process is an acceptable rationale, when that conversion does not entail unacceptable cost or risk for maintenance.

Process to Approve a Modification

1. A modification program acquisition category (ACAT I-IV) is based on the same criteria as a typical, full development program. Program management, milestone review forums, and MDAs are also based on the ACAT level assignment criteria for a full development program. A new ORD is written for ACAT I and II modifications.

2. Major modifications (ACAT I or II) or modifications to ACAT III DoD oversight programs that require approval by the Defense/Army Acquisition Executive follow the guidance for Milestone III decisions. For ACAT III (no DoD oversight) and IV modifications, the documentation required to obtain a favorable milestone decision is streamlined to the maximum extent possible.

3. Class I modifications can generally be categorized as one of two types. The modification either affects form, fit, function, electromagnetic characteristics, safety, and/or logistics supportability as specified in the approved requirements document or it affects contractual factors such as cost to the government (including incentives and fees) or contract guarantees. The MATDEV usually approves Class I modifications affecting contractual factors. Other Class I modifications follow the procedures described below.

a. The MATDEV receives a modification recommendation from any source and evaluates it ensuring, where appropriate, authorities for joint interoperability concerns are consulted. If the MATDEV rejects the recommendation, the MATDEV provides the originator the rationale for rejection and no further action is necessary provided the recommended change does not affect form, fit, function, electromagnetic characteristics, safety, and/or logistics supportability. When form, fit, function, interoperability, electromagnetic characteristics, safety, and/or logistics supportability are affected, the MATDEV and CBTDEV evaluate the recommendation jointly. If the recommendation is accepted, the CBTDEV approves and prioritizes ACAT III modifications or, for ACAT I and II modifications, forwards a recommendation to DCSOPS for approval and prioritization.

b. Once either DCSOPS or the CBTDEV validates and prioritizes the modification request, the MATDEV updates existing documents. The MATDEV should change those portions of the Acquisition Strategy (AS) affected by the modification and any other documents affected by the proposed modification (Test and Evaluation Master Plan (TEMP), etc.). The MATDEV should also prepare a Engineering Change Proposal (ECP). This initial ECP is recommended not only to record known information, but also to highlight those areas where additional information is needed. See below for guidance on the appropriate funds used for development and documentation of the modification.

c. The MATDEV staffs the completed AS update with the functional directors and CBTDEV for review and comment. If the modification reduces or eliminates a safety hazard, a copy of the AS should be staffed with the U.S. Army Safety Center, ATTN: CSSC-SE for review and evaluation.

d. The MATDEV convenes a Configuration Review Board (CRB) to review the prepared ECP. The CRB consists of representatives from ODCSOPS; Director, Program Analysis and Evaluation (PA&E); the Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA(ALT)); the Army Budget Office (ABO); TRADOC; the Army Materiel Command (AMC); the CBTDEV; and any other organizations impacted by the change (including, where applicable, activities with joint interoperability interests, such as DoD executive agents, joint commands, or other services having interfacing systems). The CRB may review the modification proposal several different times depending on the maturity of the proposal. The MATDEV forwards the AS and CRB evaluation of the proposed modification to the appropriate MDA. The MDA reviews these documents to reach a decision on incorporating the modification.

4. A significant revision to an approved modification that exceeds the level of authority of the MDA who initially approved it should be approved at the next higher level of authority.

5. An approved modification may be canceled, usually because the original requirement for the modification has changed or technical problems render the modification impossible. Pending approval of the cancellation, the MATDEV should suspend all programming and budgeting for the modification until the final decision is made. The requirements validation authority or MDA that approved the modification approves the cancellation. Cancellation of a safety modification requires a system safety risk assessment approved by the appropriate risk decision authority.

6. Appeals to modification decisions of the MDA may be made through the acquisition chain of command.

Funding For Modification Planning

1. The cost to develop, prepare, assemble, reproduce and coordinate a modification for submission to the CRB is not charged to the cost of the proposed modification. These efforts are funded by the following appropriations:

a. RDTE Activity 6.7 funds redesign of an item to enhance the current performance envelope, including related development, test and evaluation efforts.

b. The appropriate Procurement Appropriation funds engineering services and related efforts by the producing contractor or manufacturing installation, applied to items currently in production for the purpose of extending the useful military life of such items within the then current performance envelope.

2. The method used to determine the appropriations used to fund the engineering effort, the procurement of modification kits and the application of the modification kits/data collection should be coordinated with the MATDEVs business manager.

a. A modification to software that causes a modification to hardware should be processed and funded as a hardware modification. In a case where there is a modification only to the software of a system/end item, costs are funded with the same appropriation that funded engineering of the modification. Any modification/enhancement of software requires appropriate funding for involvement of organizations that make the changes and provide software support services, such as replication, duplication, installation, and testing.

b. When a modification to an investment item causes a change to an expense/secondary component of that investment item (such as associated training devices and training subsystems), then all costs of the change to that component are funded with the same appropriation that funded the modification to the investment item.

Emergency/Urgent/Routine Modification

A modification is designated Emergency, Urgent or Routine based on its criticality (such as threat change, security compromise, warfighting capability or safety condition). A modification is considered Routine unless justified otherwise. Criteria and classification of modifications is performed in accordance with (IAW) AR 750-10.

1. Emergency modification. An emergency priority is assigned to a modification proposed for any of the following reasons:

a. To change operational characteristics which, if not accomplished without delay, may seriously compromise national security;

b. To correct a hazardous condition which may result in fatal or serious injury to personnel or in extensive damage or destruction of equipment. (A hazardous condition requires a System Safety Risk Assessment per AR 385-16.); or

c. To correct a system halt (abnormal termination) in the production environment such that Computer Software Configuration Item mission accomplishment is prohibited.

2. Urgent modification. An urgent priority is assigned to a modification proposed for any of the following reasons:

a. To cause a change which, if not accomplished expeditiously, may seriously compromise the mission effectiveness of deployed equipment, software, or forces;

b. To correct a potentially hazardous condition, the uncorrected existence of which could result in injury to personnel or damage to equipment. (A potentially hazardous condition requires a System Safety Risk Assessment.);

c. To meet significant contractual requirements (e.g., when lead time will necessitate slipping approved production or deployment schedules if the change is not incorporated);

d. To accomplish an interface change which, if delayed, would cause a schedule slippage or increase cost;

e. To accomplish a significant net life cycle savings to the Government, as defined in the contract, through value engineering;

f. To correct unusable output critical to mission accomplishment;

g. To correct critical configuration item files that are being degraded; or

h. To cause a change in operational characteristics to implement a new or changed regulatory requirement with stringent completion date requirements issued by an authority higher than that of the functional proponent.

3. Routine. A routine priority is assigned to a proposed modification when emergency or urgent priorities are not applicable.

4. An Emergency/Urgent safety modification is usually preceded by a Safety-of-Use Message or Safety-of-Flight Message IAW AR 750-6 or AR 95-3, respectively. To initiate an Emergency/Urgent modification, the MATDEV should obtain concurrence from HQDA (DCSOPS) and the CBTDEV, and from the Army Safety Center for safety related changes. Complete follow-on documentation should be provided within 30 calendar days after initiation of the modification. A Safety-of-Use/Safety-of-Flight message is not required for modifications that require correction of an operational deficiency (warfighting). The level of urgency of this modification is approved by DCSOPS.

Determining Quantity of System/End Items to be Changed

The MATDEV should ensure that the quantity of end items requiring application of an approved modification is estimated as accurately as possible when preparing the AS. CBTDEV ensures that the requirements are validated and approved. Procurement of kits and other supporting items (expendable) for application is planned according to priorities and procedures as stated in AR 11-12 and AR 725-50.

Army modification policy embraces the principles of configuration management and requires, whenever possible, application of modifications to the entire inventory of a system/end item rather than to a portion of the inventory.

Test and Evaluation (T&E)

Testing and evaluation is performed and documented in accordance with DoD 5000.2-R, DoDD 4630.5, DoDI 4630.8, CJCSI 6212.01A, AR 73-1, AR 70-1, and DA PAM 73-1 through 73-7.

Modification Work Orders (MWOs)

An MWO is the method for applying approved modifications to configuration items that have been accepted into the Army inventory (signed DD Form 250 (Materiel Inspection and Receiving Report)). The item to be modified may be new or used (e.g., awaiting shipment, in storage, in use, or in maintenance/overhaul; at contractor plant, in a warehouse, in a fielded organization, or in depot; etc). AR 750-10 provides detailed MWO guidance.

1.4.6 Demilitarization and Disposal

Points of contact:

HQDA, Office of the Deputy Chief of Staff for Logistics, 500 Army Pentagon, ATTN: DALO-SMP, Washington, DC, 20310-0500

Commander US Army Armament Research and Development Command, ATTN: AMSTA-AR-FSX, Bldg 281, Picatinny Arsenal, NJ 07806-5000

References:

Defense Federal Acquisition Regulation Supplement, Part 217.70, “Exchange of Personal Property.”

DoD 4140.1-R, “DoD Materiel Management Regulation.”

DoD 4160.21-M, “Defense Reutilization and Marketing Manual.”

DoD 4160.21-M-1, “Defense Demilitarization Manual.”

DoDD 5160.62, “Single Manager Responsibility for Military Explosive Ordnance Disposal Technology and Training.”

AR 75-15, “Responsibilities and Procedures for Explosive Ordnance Disposal.”

ARDEC Pam 70-3, “A Guide for Weapon Systems Developers.”

See referenced manuals for information regarding demilitarization and disposal and Explosive Ordnance Disposal (EOD).

When authorized equipment is to be replaced by a similar item, do not turn-in the existing item or order the replacement item until it has been determined that the current item cannot be exchanged as part of the acquisition of the replacing identical or similar item. See DoD 4140.1-R, C6.2 and Defense Federal Acquisition Regulation Supplement 217.70.

1.5 Milestone Decision Points

Point of Contact: Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 103 Army Pentagon, ATTN: SAAL-ZD, Washington, DC 20310-0103

The MDA establishes tailored milestone decision points for each acquisition program as early in the assigned program's life cycle as possible. Successful passage of each milestone is essential for the program to move toward its final phase of production, fielding, and deployment. The Milestone Decision Points that are provided here for information are discussed in greater detail in paragraphs 1.5.1 through 1.5.4 of DoD 5000.2-R.

1. Milestone 0: Approval to conduct Concept Studies.
2. Milestone I: Approval to begin a new acquisition program.
3. Milestone II: Approval to enter Engineering and Manufacturing Development.

   LRIP Decision: Approval to enter LRIP.
4. Milestone III: Approval for Production or Fielding/Deployment.

Included, as part of the discussion in DoD 5000.2-R, is the identification of those items that the MDA must approve as part of the milestone decision and those items that are mandatory because of statutory requirements.

These milestone decision points are equally applicable to all normally paced acquisition programs whether they are reviewed by an Army Systems Acquisition Review Council (ASARC), Information Technology Overarching Integrated Product Team (IT OIPT), or In-Progress Review (IPR). For Information Technology (IT) programs however, the milestone title may be changed somewhat for software intensive systems.

Systems that are being acquired through rapid acquisition programs (for example, the Warfighting Rapid Acquisition Program (WRAP) for successful TRADOC Advanced Warfighting Experiments (AWEs) or the Fast Track Acquisition Program for selected technology demonstrations) pass through at least some of these milestones. However, because they are being placed on the rapid acquisition path, the WRAP or Fast Track ASARC usually approves the system for entry into the Engineering and Manufacturing Development (Milestone II) Phase.

1.5.1 Milestone 0: Approval to Conduct Concept Studies

Point of Contact is the same as paragraph 1.5.

1.5.2 Milestone I: Approval to Begin A New Acquisition Program

Point of Contact is the same as paragraph 1.5.

1.5.3 Milestone II: Approval to Enter Engineering and Manufacturing Development

Point of Contact is the same as paragraph 1.5.

1.5.3.1 Approval to Enter LRIP

Point of Contact is the same as paragraph 1.5.

1.5.4 ~~Milestone III: Production or Fielding/Deployment Approval~~ (Type Classification Procedures)

Points of contact:

Director, Acquisition Policy (SAAL-RP), Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 2511 Jefferson Davis Highway, Arlington, VA 22202-3911
Assistant Secretary of the Army (Installation and Environment), 110 Army Pentagon, Washington, DC 20310-0110
Headquarters, U.S. Army Materiel Command, ATTN: AMCRDA-AP (AMCRDA-TE for MSR), 5001 Eisenhower Avenue, Alexandria, VA 22333-0001
U.S. Army Force Management Support Agency, USAFMSA- ADD, 9900 Belvoir Road, Suite 120, Fort Belvoir, VA 22060-5587
U.S. Army Force Management Support Agency, USAFMSA-RDD, 415 Sherman Avenue, Fort Leavenworth, KN 66027-2300
Deputy Chief of Staff for Logistics, ATTN: DALO-SAZ, 500 Army Pentagon, Washington, DC 20310-0500
U.S. Army Training and Doctrine Command (TRADOC), Fort Monroe, VA 23651-5000
U.S. Army Materiel Systems Analysis Activity, Aberdeen Proving Ground, MD 21005
U.S. Army Materiel Command, Logistics Support Activity, Huntsville, AL 35898
U.S. Army TMDE Activity, Redstone Arsenal, AL 35898-5400
U.S. Army Operational Test and Evaluation Command, Park Center IV, 4501 Ford Avenue, Alexandria, VA 22302-1458

References:

DoD 7000.14-R, “DoD Financial Management Regulation, Volumes 2A and 2B.”
AR 5-12, “Army Management of the Electromagnetic Spectrum.”
AR 25-1, “The Army Information Resources Management Program.”
AR 25-30, “The Army Integrated Publishing and Printing Program.”
AR 40-10, “Health Hazard Assessment Program in Support of the Army Materiel Acquisition Decision Process.”
AR 70-47, “Engineering for Transportability.”
AR 70-38, “Research, Development, Test, and Evaluation of Materiel for Extreme Climatic Conditions.”
AR 71-9, “Materiel Requirements.”
AR 71-32, “Force Development and Documentation-Consolidated Policies.”
AR 73-1, “Test and Evaluation Policy.”
AR 200-1, “Environmental Protection and Enhancement.”
AR 200-2, “Environmental Effects of Army Actions.”
AR 350-38, “Training Device: Policies and Management.”
AR 385-16, “System Safety Engineering and Management.”
AR 670-1, “Wear and Appearance of Army Uniforms and Insignia.”
AR 700-18, “Provisioning of U.S. Army Equipment, Internal Control System.”
AR 700-82, “Joint Regulation Governing the Use and Application of Uniform Source, Maintenance, and Recoverability Codes.”
AR 700-138, “Army Logistics Readiness and Sustainability.”
AR 700-142, “Materiel Release, Fielding, and Transfer.”
AR 708-1, “Cataloging of Supplies and Equipment Cataloging and Supply Management Data.”
AR 710-1, “Centralized Inventory Management of the Army Supply System.”
AR 710-2, “Inventory Management Supply Policy Below the Wholesale Level.”
AR 735-5, “Policies and Procedures for Property Accountability.”

AR 750-2, “Army Materiel Maintenance, Wholesale Operations.”
AR 750-43, “Army Test, Measurement and Diagnostic Equipment Program.”
SB 700-20, “Army Adopted/Other Items Selected for Authorization / List of Reportable Items.”

This section provides general guidance to the Army for the implementation of AR 70-1 policy on Type Classification (TC). TC is the Army's implementation of the DoD budget guidance requirement that an item is “acceptable for service use” before expending procurement funds. AR 70-1 further defines TC and provides the TC designations. TC actions will be reviewed as part of the Working level Integrated Product Team (WIPT) and treated in the same way as all program requirements. That is, the MDA is the final approval authority and as such can tailor documentation requirements and override requirements/non-concurrence, as they deem appropriate.

An additional TC designation, Low-Rate Production (LRP), not described in AR 70-1, may be used at the discretion of the MDA. TC LRP should be used in conjunction with a program review between MS II and III to identify materiel items approved for Low Rate Initial Production (LRIP) at Milestone II. LRIP quantities type classified LRP should be funded from the Procurement Account.

Note: Items procured during LRIP that are required for test purposes and will not be returned to the operational inventory will be RDT&E funded. These items are not type classified.

TC Obsolete (OBS) and TC Contingency (CON) are covered in AR 710-1.

Exemptions to Type Classification

Certain materiel items do not require TC; however, safety and health requirements must be met for items that contain safety or health hazards, prior to their acceptance for Army use (see Figure 1-3).

Classes of items that are exempt from TC requirements and the required conditions follow:

1. Items for which approval is the responsibility of the HQDA Deputy Chief of Staff for Personnel (DCSPER), such as military decorations, medals, and heraldic flags.

2. Commercial construction material (for example, lumber, cement, brick, and sand), excluding mechanical, electro-mechanical, electrical, electronic hydraulic, and pneumatic items.

3. Nonmilitary administrative items such as file cabinets, adding machines, word processors, office furniture, laundry equipment, and musical instruments. The General Services Administration (GSA) has responsibility for establishing Government-wide standards and provides Federal Supply Schedule contracts or stock catalogs under which such items may be procured. A Line Item Number (LIN) and national stock number (NSN) must be assigned. Included under this class of items are the following three Common Table of Allowances (CTAs) for which the U.S. Army Office of the Deputy Chief of Staff for Operations and Plans (ODCSOPS) (U.S. Army Force Management Support Agency (USAFMSA)) has approval authority:

a. CTA 50-900, Clothing and Individual Equipment (CIE). This CTA includes (approved by USAFMSA, acting as agent for ODCSOPS) commercial non-adopted (local purchase) optional purchase and wear items identified in AR 670-1 which do not require centralized item management (such as ceremonial uniforms and accessories, band uniforms, equipment for Special Ceremonial Units authorized by AR 71-32, and safety equipment such as helmets for football, motorcycle/bicycle, horseback riding and construction work, yellow rain gear, and Occupational Safety and Health Administration (OSHA) approved safety harnesses).

b. CTA 50-909, Field and Garrison Furnishings and Equipment in AR 71-32.

c. CTA 50-970, Expendable/Durable Items (except medical, Class V, repair parts and heraldic items). Expendable and durable items are defined in AR 735-5, chapter 7.

Safety and Health Data Sheet

Item/system identification: Name/nomenclature

1. Dates of safety confirmation letters are as follows:

a. Developmental test(s), including findings of both the Testing Activity and the Independent Evaluation. (date of confirmation letter).

b. Operational test(s) (date of confirmation letter).

c. Production test(s) (date of confirmation letter).

d. Safety Assessment Reports.

e. Special Safety Studies and Assessments.

2. Item (does) (does not) contain radioactive materials and (if it does) is properly licensed by NRC (number) and/or DA authorization (number), as appropriate. If NRC license or HQ authorization has not been obtained, provide status of current effort with a planned approval date prior to Government possession of those items.

3. Item (does) (does not) contain explosives and (if it does), the following activities should be addressed:

a. (Interim) (Final) Hazard classifications. (Provide hazard classifications for the item and all of its explosive components, which require a separate shipping configuration, and dates when final hazard classifications (were) (will be) approved). Interim and Final Hazard Classifications data shall include the following:

(1) Quantity-distance class (1.1, 1.2, 1.3, 1.4, etc.).
(2) Storage compatibility group (A, B, C, D, E, F, etc.).
(3) Department of Transportation (DOT) class.
(4) DOT marking (marking according to code of Federal Regulations, Title 49, Part 172.101).
(5) Net explosive weight.
(6) Net propellant weight in pounds and kilograms.
(7) Explosive weight for QD purposes (based on TNT equivalency tests if propellant is involved.
(8) DOT EX NUMBER (if applicable)

b. Range safety data.

(1) Maximum range and ordinate (as determined by test or analogy).
(2) Drift and probable errors (as determined by test or analogy).
(3) Ricochet characteristics (as determined by test of analogy).
(4) Sound pressure levels and overpressures from other than acoustic sources (as determined by test or analogy).
(5) Fragmentation radius (as determined by test or analogy).
(6) Rearward debris and/or blast and over pressure (as determined by test or analogy).
(7) Laser range safety data (as determined by test or analogy).
(8) Meteorological limitations (as determined by test or analogy).

c. Insensitive munitions. It should contain the following data:

(1) Threat Hazard Analysis (THA) completed.
(2) Fast cookoff (passed/failed).
(3) Bullet impact (passed/failed).
(4) Sympathetic detonation (passed/failed).
(5) Fragment impact per THA (passed/failed).
(6) Slow cookoff per THA (passed/failed).
(7) Shaped charge jet per THA (passed/failed).
(8) Electromagnetic pulse (passed/failed).
(9) Electrostatic discharge (passed/failed).

d. Explosive Ordnance Disposal (EOD) procedures and rendering safe and disposing of explosive items developed (yes) (no). Emergency entry and downloading EOD procedures prepared for Army Combat Vehicles, Remotely Piloted Vehicles, and Army Aircraft (yes) (no).

Figure 1-3. Sample Format for Safety and Health Data Sheet

e. Minimum non-propagation distance, as applicable (based on test and evaluation data). If minimum non-propagation data will be required for production then that data must be available prior to type classification. If it will be required for out-year activities (i.e., demil, disposal, retrofit, rebuild) then that data must be available prior to Materiel Release of the item. If minimum non-propagation distance data (i.e., conveyor spacing data) is not required that decision must be documented with concurrence of AMCOM or IOC, as appropriate.

f. Demilitarization and disposal procedures for disposal of hazardous, excess, or obsolete munitions.

g. Safety certification from the Army Fuze Safety Review Board as applicable (date and restrictions).

4. Item (does) (does not) contain munitions. If it does, compatibility of the following weapon/ammunition components has been established:

5. Item (does) (does not) produce health hazards. The U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM) has performed a HHA and the following corrective actions (were) (will be) implemented (include the USACHPPM HHA report as an addendum).

6. Transportability/Roadability has been approved for all required modes of transportation.

7. Non-developmental item. (Use only if reporting a non-developmental item.)

a. Results of the user or market investigation indicate that all safety and health features and characteristics specified in the requirements document (are) (are not) commercially available. (List those that are not available and a brief statement of the impact of their non-availability.)

b. All safety and health features and characteristics that were both specified in the requirements document and verified as available by the user or market investigation (have) (have not) been included in the performance specifications for the item. (List those that have not been included and provide a brief statement of the impact of the exclusion.)

c. Item (does) (does not) involve hazardous materials and (if it does) demilitarization/disposal and EOD procedures (if applicable) have been developed.

8. Risk assessment. Perform a risk assessment of identified high and medium risk level safety and health hazards based upon the decision authority matrix contained in the system safety management plan and MIL STD 882. This assessment will address hazards that are being fixed; or are yet to be fixed; or residual hazards that will not be eliminated by design. This assessment will define decisions regarding resolution of each identified hazard; design features and controls being or to be implemented for elimination or reduction of associated risks to acceptable levels; and describe any residual hazards concerning safety risks to user personnel and Government equipment/facilities that have not been eliminated through design. Provide program milestones for planned corrective actions on hazards yet to be resolved during next acquisition phase. If a formal System Safety Risk Assessment (SSRA: AR 385-16; and Decision Authority Matrix of System Safety Management Plan) is required, it will be included as an addendum to this SHDS.

9. Summary/Conclusions. Summarize the results of the above identified safety and health letters and reports. Identify any outstanding safety and health problems and indicate what corrective actions are planned and when they will be implemented and verified. Identify (if any) specific procedural controls and precautions that should be followed. Conclude with a statement as to whether or not the system is safe to test/operate/proceed to the next acquisition phase.

Prepared by: Government Program Safety Engineer date Coordination with the Program Manager (PM) is recommended.

Concurred in by: As many blocks as appropriate date. Attach copy of the USACHPPM HHAR or AMC Surgeon endorsement stating the system has no potential uncontrolled health hazards associated with its use or maintenance as an addendum to the SHDS.

Approved by: Chief, Safety Office date The SHDS establishes the position of the MSC Safety Office for corresponding milestone decision.

Figure 1-3. Sample Format for Safety and Health Data Sheet (continued)

4. Items required only by Joint Table of Allowances (JTA)/Table of Distribution and Allowances (TDA) units and items adopted by other Services, managed by the Defense Logistics Agency (DLA), for which DLA has responsibility for certifying production. Assignment of LIN and NSN is required.

5. Commercial items, such as Base-level Commercial Equipment (BCE), which are authorized only by JTA/TDA. The MACOM approves requests for commercially available items listed in SB 700-20, chapter 6, when coded BCE manpower and personnel plan (MAPP), regardless of dollar threshold. BCE equipment not appropriately coded, but appearing in SB 700-20 is forwarded to HQDA, USAFMSA, for approval. The Army Authorization Document System (TAADS) proponents (normally MACOM Commanders) have approval authority for commercially available items costing less than $100,000, exempt from type classification, not HQDA controlled, and not centrally managed (AR 71-32). Assignment of LIN and NSN is required if unit cost is $100,000 or more. Exemptions also meet the following criteria:

a. Consideration has been given to Standard (STD) items and none will satisfy the requirement.

b. Function is required only by the requesting unit and is not a common requirement of any or all units under cognizance of the proponent. When a common requirement is surfaced, the JTA/TDA proponent advises the mission assignee agency. A determination is made by the mission assignee agency as to whether the item should be centrally managed and type classified.

c. Provisions for the total life cycle logistic support is the responsibility of the JTA/TDA proponent; repair parts and maintenance services should be obtained from local sources other than the Army wholesale supply system.

6. Components of end items if the sole basis of issue of the component as a separate item is restricted to HQDA-approved schools, training centers, laboratories, maintenance and test activities, and other selected activities. Provisions for the total life cycle logistic support is the responsibility of the selected activity.

7. Special tools that automatically assume the TC of the item they support. (See “General TC Assignment Procedures” section below.)

8. Expendable CTA items and repair parts (Class IX) that are not ammunition (Class V), individual equipment, selected high density military items (e.g., combat rations and intrusion detectors), or other selected expendable items designated by HQDA (SAAL-RP). HQDA selected expendable items should be type classified and included in SB 700-20.

9. Nonstandard materiel and equipment approved by HQDA for support of allies, but not used by the Army. Assignment of LIN and NSN is required.

10. Nonstandard materiel and equipment that has no application to the Army, but for which the Army has been designated as the DoD item manager, or for which the Army has life cycle support responsibilities.

11. Items procured for operation and support only by contractors or industrial facilities; that is, items not used by the Army in the field and not requiring Army logistic support.

12. Items procured with non-appropriated funds.

13. Items procured only for DoD civil defense effort, except those items which are required to provide protection to DoD personnel or to be used by them to quell disturbances.

14. Automated data processing equipment (ADPE), leased under the provisions of AR 25-1, unless procurement of the item and support through the DoD logistic system is planned to occur.

15. Ammunition used in acceptance testing of production weapons.

16. Locally fabricated training aids IAW AR 350-38.

17. Training aids, devices, simulators, and simulations required only by JTA/TDA. LIN and NSN are assigned for each training aid, device, simulations, and simulators (TADSS).

18. Nonstandard, nonmilitary end items and components, to include mechanical, electro-mechanical, electric, and electronic items, that are procured for the operation and support of the Armed Forces Radio and Television Services.

19. Components of authorized medical sets, kits, and outfits (SKO) that require separate authorization for purposes of special management and readiness reporting, when approved by waiver by HQDA ODCSOPS (USAFMSA). Assignment of LIN and NSN is required if unit cost is $25,000 or more. These components must meet the following criteria:

a. No personnel or training implications.

b. No additional logistic support requirements.

c. No additional funding required.

d. Basis of issue must be one-for-one.

20. National Security Agency (NSA) peculiar equipment, procured with NSA funds, for (INSCOM) Field Station TDA units.

General TC Assignment Procedures.

TC of Acquisition Category (ACAT) I and II programs is the responsibility of the Army Systems Acquisition Review Council (ASARC) and the AAE is the TC approval authority. The MATDEV should request convening of an ASARC. The MATDEV prepares the package for consideration by the ASARC.

For ACAT III and IV programs, TC is accomplished as part of an In-Process Review (IPR) and approval authority is the milestone decision authority (MDA) (e.g., PEO, DSA, or Materiel Command Commander). For CIE items, the Army Uniform Board (AUB) recommends TC to the Chief of Staff of the Army, who is the approval authority for dress uniforms, clothing bag items, and optional purchase items. The PM-SDR recommends TC to Commander, Soldier Systems Command (SSCOM) who is the approval authority for Organizational Clothing and Equipment (OCIE) (AR 70-1).

1. The Integrated Product Team (IPT), as part of the preparation for the Milestone Decision Review, should review TC. TC recommendations are made by IPR IPT members, incorporated into IPR minutes, and approved by the MDA. Type Classifications are effective on the date approved by the appropriate decision authority.

2. Figure 1-4 shows a sample format that can be used to document TC recommendations as an enclosure to the IPR minutes.

The review body should type reclassify STD items to OBS concurrently with TC of a new item as STD. The replacement items will be considered for new LINs. All items under old LINs will be considered for reclassification to OBS at the time a replacement item is type classified STD.

TC actions should be signed by the MDA and a copy of the action should be forwarded to the Army Materiel Status Office for recording (see Appendix XVI—Materiel Status Record, of this pamphlet).

Items being developed for the U.S. Army should not be sold to foreign military sales (FMS) customers prior to TC STD without written HQDA (DUSA-IA) approval. All type reclassification actions should be coordinated with HQDA (DUSA-IA) prior to approval in order to allow assessment of impact on FMS. Foreign releasability should be addressed in IPR packages.

Special tools automatically assume the TC awarded to the end item they support, and should be tested with the end item as part of the System Support Package.

All Test Measurement and Diagnostic Equipment (TMDE) and training aids or devices should be separately type classified (unless specifically exempted by AR 70-1 and the “Exemptions To Type Classification” section above).

An item should not be type classified as STD until all major materiel subsystems are eligible for the same TC category. These include components, computer programs, special tools, training aids and devices, TMDE, and other support equipment. The principal end item(s) and its subsystems are usually type classified in a single action.

All type classified end items (including separately type classified components) except TC Generic notional items are assigned Standard Line Item Numbers (SLIN), NSN, and logistic control codes (LCC). They are entered into the SB 700-20, according to AR 708-1, AR 71-32.

TC decisions should be recorded in the commodity command standard system.

Items otherwise required to be type classified will not be type classified unless procurement is planned within the current Program Objective Memorandum (POM) period (AR 70-1). For items not in the current POM, an IPR may be held to determine the item's eligibility for TC and to authorize the MATDEV/mission assignee agency to unilaterally type classify at the time procurement is planned.

Type Classification Recommendation

1. A Milestone Decision Review (MDR) Review was held on (date), resulting in a determination that (name of system or item).
   - *a.* Is (not) (not yet) (no longer) acceptable for the mission intended.
   - *b.* Does (not) meet regulatory prerequisites for (entry into) (retention) in the Army inventory.
   - *c.* (Applicable to LP only) Is required, in limited quantity (number of items or systems) for limited time (number of months), with a type classification program decision review scheduled for (date), for additional operational testing (or an urgent operational requirement) described as follows:
   - *d.* (Is) (Is not) safe for all aspects of use (Safety and Health Data Sheet attached).
   - *e.* Does (not) satisfy the user DTLOMS requirements:
     - (1) Doctrine development.
     - (2) Training (Operations and Maintenance).
     - (3) Leadership training.
     - (4) Organizational implications.
     - (5) Materiel (Operational Requirements).
     - (6) Soldier (Military Occupational Specialty (MOS) available).
   - *f.* (Is) (Is not) logistically supportable in its intended environment.
   - *g.* Does (not) meet technical performance requirements (technical evaluation attached).
   - *h.* (For TC STD) Has a HQDA approved BOIP dated /or has a HQDA approved deferral, dated .

2. Accordingly, recommend the item or system (not) be type (re) classified from (STD, GENERIC, LRP, CON, OBS, or LP) to (STD, GENERIC, LRP, CON, OBS, or LP).

3. Replacement information: (if not applicable), enter “none.”) The item or system (replaces) (is replaced by) LIN (number), NSN (number), which (is/is not) being recommended for type (re) classification as part of this action.

4. Specific end items recommended for type classification or reclassification: (Multiple items may be listed sequentially by item or by data element. Provide complete information for each separately issued end item, including special tools; all test, measurement, and diagnostic equipment; TADSS; or other support equipment.)
   - *a.* Federal item identification.
   - *b.* ZLIN.
   - *c.* SLIN.
   - *d.* NSN.
   - *e.* RICC.
   - *f.* Type (re) classification from ... to ...
   - *g.* BOIP number.
   - *h.* Requirement (CARDS No., MNS, ORD, other).

5. End items for materiel condition reporting are: (identify by LIN and nomenclature; state whether the item is a component of a major system identified in AR 700-138, Army Logistics Readiness and Sustainability.)

Note: IPR approval, and distribution are prescribed for IPRs in chapter 4 of AR 70-1/part 2, paragraph 2.4.2 of this pamphlet.

Figure 1-4. Sample Format for Type Classification Recommendation

Materiel should be type classified prior to procurement of production items. When justified, OASA(ALT) may authorize the commitment of appropriated funds for the procurement of long-lead-time materiel's that the MATDEV must have to produce the system and achieve the data required for TC. Approval of long-lead-time items does not constitute a waiver of TC.

TC Standard Prerequisites

The prerequisites to TC STD are—

1. Approved requirements document (DoD 5000.2-R and AR 71-9).

2. HQDA approved Basis of Issue Plan (BOIP)/ Qualitative and Quantitative Personnel Requirements Information (QQPRI), unless deferred. (See the “Special TC Procedures” section below.)

3. Adequate test and evaluation conducted to assess the technical performance and operational effectiveness, suitability, and survivability (AR 73-l), and a determination made that the item is effective, acceptable, and supportable for the intended mission. This decision is dependent upon the following:

a. A system evaluation report (SER), which assesses the technical performance; system safety; and operational effectiveness, suitability and survivability is complete.

b. All significant system problems have been identified and low risk solutions to these problems are available.

4. Assurances the warfighters need for Doctrine, Training, Leader development, Organizational structure, Materiel, and Soldier (DTLOMS) considerations associated with system/equipment are documented.

5. Army TMDE Activity assessment has been obtained for the acquisition and supportability of TMDE (AR 750-43).

6. HQDA approved frequency allocation for systems/items that use the electromagnetic spectrum (AR 5-12).

7. MATDEV/mission assignee agency certifies conformance to environmental regulations or provides certification of exemption (AR 73-1, AR 200-1, and AR 200-2).

8. Transportability assessment has been obtained from the Military Traffic Management Command (MTMC) (AR 70-47).

9. Completion of a Safety and Health Data Sheet (SHDS) (see Figure 1-3 for a sample format) and, when required, development of a System Safety Risk Assessment (SSRA). Identified safety and health hazards must be eliminated or controlled to a level acceptable to the appropriate decision authority for the system. A documented SSRA, with the risk acceptance and date thereof, is placed on file with the local safety office for any residual safety and health hazards per Decision Authority Matrix contained in the approved System Safety Management Plan (SSMP) (Mil Std 882 (or its replacement), AR 385-16, AR 40-10).

10. Request for assignment of an NSN should be submitted to Defense Logistics Services Center (DLSC). (See Figure 1-4.)

11. Request for assignment of SLIN from U.S. Army Logistics Support Activity (LOGSA) upon receipt of NSN. (See AR 708-1, Cataloging Requirements, to request a SLIN.)

12. Status of a complete technical data package (TDP) to include rights to use the data, adequate for competitive procurement. If a TDP is not required based on FAR guidance, provide justification to the Milestone Decision Authority (MDA). The TDP should be available prior to MDR III, if competitive procurement or operational support other than by the developer is planned following production decision. An inadequate TDP is sufficient justification to defer TC STD, if the approved acquisition strategy states that a TDP must be available for procurement.

13. Production risks and production readiness have been reviewed and assessed by means of Production Readiness Reviews (PRRs).

14. Producibility should be demonstrated during the Engineering and Manufacturing Development Phase as a method of reducing risk in production.

15. The status of Integrated Logistic Support (AR 700-127), to include software support, should be addressed. This includes an assessment of reliability, maintainability, ability to rapidly deploy software revisions and associated training material, as well as an identification of open issues and their expected completion dates. Examples of rapid deployment considerations include the use of standardized software downloading equipment and software and the feasibility to use the Internet/www for secure software distribution.

16. The completion of natural environmental testing in the basic climatic design type (AR 70-38), and as contained in appropriate requirements documents and the Test and Evaluation Master Plan (TEMP)(AR 73-1).

a. Items designated specifically or primarily for use in extreme natural environments (i.e., hot, cold, and severe cold) should successfully complete the extreme climatic tests for the specific areas of intended use.

b. Acquisition quantities are limited to requirements for those areas for which environmental testing has been completed, unless a waiver has been granted by the Assistant Secretary of the Army (Installation and Environment).

TC Generic Procedures for Commercial and Non-Developmental Items (CaNDI)

While prerequisites for TC STD apply for CaNDI, many may have already been satisfied by commercial requirements (e.g., environmental, quality, safety, catastrophic and critical hazards, and transportability considerations). Additionally, testing requirements may be significantly reduced prior to TC, based on contractor data and MATDEV surveys of user experience. The results of this data to include surveys are evaluated and addressed in the System Evaluation Report developed to support the MDA.

All CaNDI should be type classified and a SLIN assigned unless exemption categories specifically apply.

CaNDI can be type classified in a two-step process when a make and model number are not known.

1. TC Generic is the first step. Prior to solicitation at a program review, Generic designation may be approved, based on performance specifications or a functional purchase description. The recommendation for TC Generic must cover all criteria required for TC STD, state the rationale for omissions or deficiencies and outline plans (including estimated time frame) for meeting TC STD criteria. This allows the solicitation to proceed. The TC Generic designation should be recorded in the Materiel Status Record in accordance with Appendix XVI—Materiel Status Record, of this pamphlet; however, they will not be reflected in SB 700-20.

2. The second step is TC STD, accomplished when the manufacturer is selected, all testing procedures and acceptance criteria are satisfied, the make and model number are identified with the item, and an NSN is identified.

Combining Type Classification and Materiel Release Approvals for CaNDI

At the discretion of the MDA, ACAT III and IV CaNDI with a TC Generic designation may be approved for TC Standard simultaneously with Materiel Release. First Unit Equipped quantities of materiel should be available at time of release. This process allows the proponent to submit TC Standard documentation required by AR 70-1 and DA PAM 70-3 with Materiel Release documentation. Documents that address both TC and Materiel Release will be accepted as meeting the requirements for both processes. In no case will the accomplishment of TC be construed to meet all requirements for materiel release.

Limited Procurement (LP) Procedures

Items will only be type classified LP under exceptional circumstances, as described in paragraph 5-4b(3)) of AR 70-1. The TC LP designation results from an IPR.

TC LP is authorized for items required for special use, in specific quantities and for a specified period of time. The quantity of TC LP items should be keyed to specific authorization documents (including the HQDA directed requirement letter or message, when applicable) and for the specific period required to accomplish operational evaluation and type classification or to meet urgent operational need.

Criteria for TC LP of an item required for urgent operational use should include the following:

1. Existence of an urgent operational requirement, substantiated by HQDA.

2. Determination that no type classified item fully satisfies the requirement.

3. Sufficient definition of the military characteristics of the item in materiel requirements documents to allow subsequent evaluation of the item.

4. Demonstration that the proposed item does not qualify for STD and offers no more than a moderate risk.

5. Determination that the proposed item can be economically maintained and logistically supported in the geographic area and time frame for which the TC is valid.

Activities requesting TC LP should identify all units, including schools and support and test units, having or to be issued LP end items; special tools, and test equipment by LIN; unit identification code (UIC), or TDA number; unit designation; Modified Table of Organization and Equipment (MTOE) number; and quantity. This information is included in the IPR package.

Per AR 70-1, a reclassification program decision review or IPR should be scheduled at the time the item is type classified LP. Unless otherwise directed by HQDA, this reclassification review should be held within 3 years of TC LP, and should determine the continuing need for the item and recommend an extension of the LP expiration date or reclassification as STD or OBS. MATDEV/mission assignee agencies have extension approval authority, in coordination with other IPR members, for non-major programs.

Additional quantities of a TC LP item may be warranted under exceptional circumstances provided an urgent requirement for the additional quantities is justified and that the item does not qualify for reclassification. The expiration date for the additional quantity authorization should be determined from a current appraisal of the

circumstances by the IPR held to consider this request. The expiration date of the quantity previously authorized should be extended to coincide with the expiration date of additional quantities, if appropriate.

Additional quantities of TC LP items may be procured for non-Army customers with written approval from HQDA (DUSA-IA), provided customer funds are made available prior to execution of the contract option. Requests should be referred to an IPR for review only when procurement of the quantities will endanger Army production or deployment schedules.

If the requirement for a TC LP item ceases to exist, or if the quantity required is changed, the user or requester should immediately notify the developer of such changes. Information copies are forwarded to the mission assignee agency, U.S. Army Training and Doctrine Command (TRADOC), and HQDA. An IPR should be convened to determine appropriate action.

Users or requesters of LP items should collect data and provide a user evaluation statement to the MATDEV/mission assignee agency not later than 6 months following delivery of initial shipment of LP items. Information copies should be provided to HQDA (SAAL-RP), TRADOC, LOGSA, USAOPTEC, and U.S. Army TMDE Activity. The sample format for submitting user evaluation is provided in Figure 1-5.

Low-Rate Production (LRP) Procedures (Optional)

TC LRP may be used for those items approved for Low Rate Initial Production. Procedures follow:

1. TC LRP is often necessitated by the tasks related to preparing for a production decision. Per DoD 5000.2-R, approval for Low Rate Initial Production (LRIP) is at MS II. LRIP will verify the production process, provide continuity of production, utilize hard production tooling early on, and prove out the production methodology.

2. A program review may be conducted, as necessary, to TC an item LRP. The production time frame and total number of end items to be produced is part of the LRP approval. Items type classified LRP must be reclassified as STD at the full-rate production decision (MS III). TC STD prerequisites should be satisfied prior to reclassification.

3. TC LRP items may be used for initial fielding requirements prior to milestone III only if such action is explicitly approved at MS II. TC LRP items are funded from the procurement appropriation and must eventually become part of the authorized operational inventory and may not be used for R&D tests. Items procured during LRIP that are required for test purposes and will not be returned to the operational inventory, will be RDT&E funded.

User Evaluation Statement

1. (System/item/name/nomenclature) has been used by Army elements in (geographic area) since (date).

2. Analysis of performance since that time indicated that:

a. The (system/item/name/nomenclature) (is/is not) safe for all aspects of use (operations, maintenance, storage, transportation, etc.).

b. Its reliability (is/is not) acceptable to this command.

c. Its maintainability (is/is not) acceptable to this command.

d. It requires (only normal/special) support and transportation provisions (explain special) which (would) (would not) prevent it from being completely supportable.

e. The support resources (manuals, training, manpower, test/support equipment, spare parts) provided for the system (are/are not) acceptable to this command.

f. Technical risk connected with the continued fielding of this item is (low/moderate/high).

g. (System/item/name/nomenclature) is acceptable to this command for operational use. It (satisfies) (does not satisfy) all requirements for this command. Based on its performance in the operational environment, this item (should) (should not) be considered for adoption Army-wide. Recommend type classification as STD, GENERIC, LRP, LP, CON, or OBS.

h. Its MANPRINT issues and concerns (have) (have not) been resolved.

(Signed by a general officer)

DISTRIBUTION

Mission Assignee Agency

CF: HQDA (SAAL-RP, DAMO-FDR, DALO-SM, USAFISA); DAIG-SD; User representative agency (if different from user) (e.g., ATCL-C (Director of Combat Developments for Combat Service Support, CASCOM)); USAOPTEC; U.S. Army TMDE Activity.

Figure 1-5. Sample Format for User Evaluation Statement

Special TC Procedures

1. Deferral of BOIP/QQPRI.

a. Some programs, especially accelerated acquisition programs, may require deferment of HQDA approval of the Basis Of Issue Plan / Qualitative and Quantitative Personnel Requirements Information (BOIP/QQPRI) prior to TC. This deferral policy does not eliminate the requirement for HQDA approval of the BOIP and QQPRI but, rather, allows concurrent actions in order to expedite the acquisition process.

b. For ACAT I and II programs, the request for deferral should be submitted for review and comment through the Commander, U.S. Army Force Management Support Agency (USAFMSA), ATTN: MOFI-FMR, 415 Sherman Avenue, Fort Leavenworth, KN 66027-2300 to HQDA. The address for HQDA decision depends on the materiel item to be deferred. Requests for deferment of aviation and intelligence and electronic warfare items should be addressed to HQDA, Assistant Secretary of the Army (Acquisition, Logistics and Technology), 103 Army Pentagon ATTN: SAAL-SA, Washington, DC 20310-0103. Weapons and combat tracked vehicles requests should be addressed to SAAL-SC, and missiles, artillery and air defense to SAAL-SM. Combat Service Support (including TMDE) and Ammunition items should be addressed to SAAL-ZCS and SAAL-ZCA, respectively. Deferments for communication and security equipment should be addressed to HQDA, Director of Information Systems for Command, Control, Communications, and Computers, ATTN: SAIS-SD, Washington, DC 20310-0107. Information copies of deferment decisions should be provided to HQDA, ATTN: DAMO-FDR, WASH DC 20310; USAFMSA-ADD, 9900 Belvoir Road, Suite 120, Fort Belvoir, VA 22060-5587; USAFMSA-RDD, 415 Sherman Avenue, Fort Leavenworth, KN 66027-2300; and HQ AMC Materiel Status Record Office, ATTN: AMCRDA-TE, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001.

c. For ACAT III and IV programs, approval authority to defer BOIP/QQPRI prior to type classification is vested with the appropriate MDA. The MDA coordinates with USAFMSA whenever a decision to defer is made. Information copies of deferment decisions will be provided as in b. above.

d. Deferral requests should include the following information:

(1) The title of the approved requirements document and corresponding catalog of approved requirements documents (CARDS) reference number and developmental line item number (ZLIN).

(2) Justification for not having HQDA approved BOIP and QQPRI.

(3) Rationale for needing TC approval before obtaining HQDA approval for the BOIP and QQPRI.

(4) Description of potential negative impacts (if any) on establishing a support capability and training base of TC without HQDA approved BOIP or QQPRI.

(5) Projected dates that the BOIP feeder data (BOIPFD) and QQPRI were or will be submitted to the USAFMSA.

(6) Projected dates BOIPFD and QQPRI were or will be received at USAFMSA or the projected dates that the BOIP or QQPRI will be forwarded to HQDA for approval (to be furnished by USAFMSA).

2. Item modification.

a. An improved or modified item should be separately type classified when the modification or conversion involves one or more of the following:

(1) Necessitates special management because it incorporates or requires stockage of major components such as circuit card assemblies, engines, or consumable items that are different from those required for the basic item.

(2) Changes functional and physical characteristics affecting the quality of personnel and/or associated support items of equipment (ASIOE) required to support the end item.

(3) Alters the safety or health characteristics.

(4) Causes personnel changes (new MOSs are identified).

(5) Requires new Basis of Issue Plan (BOIP) per AR 71-32.

(6) Resulted from changes to the operational requirements document (ORD).

(7) Changes in the configuration result in a change in transportability requirements.

b. The mission assignee agency, in coordination with the combat developer (CBTDEV) and the logistician, determines whether or not separate TC (as a distinct new item) is required for the modified item. The agency notes this in the documentation supporting the proposed modification.

3. Type reclassification of sets, kits and outfits (SKOs).

a. SKOs should be type classified as an entity and should be treated like any other type classified item of equipment. The command or agency responsible for an SKO may replace components without reclassification action, provided the item continues to meet military requirements of the generic description of that LIN in SB 700-20 and the changes do not significantly affect safety or performance characteristics or require special management of the item. When component changes do not meet this criteria, replacements must be recorded in the Materiel Status Record (MSR) and changes submitted to update the supply catalog by the mission assignee agency. The circumstances, evaluations, and support considerations leading to the change should be explained in the record.

b. All components of SKOs, including computer programs that are not separately authorized or issued, automatically assume the highest TC designation assigned to any SKO of which they are a component. Any SKO containing as a component a type classified item will also be type classified.

c. If an item is a component of more than one SKO, and is an item of separate issue, the item should be identified as having the highest TC designation awarded.

d. When the need for an SKO no longer exists due to consolidation or end-item elimination, action should be initiated by the item manager to reclassify the SKO LIN as obsolete, and remove the supply catalog from DA Pamphlet 25-30). This may be done by completing the following actions:

(1) Obtaining a written concurrence from the CBTDEV that the SKO is no longer required. (Proposed disposition instruction should be furnished with the request for concurrence.) A copy furnished of disposition and deletion instructions should be provided to USAFMSA.

(2) USAFMSA purges all requirements and authorizations of SKO LIN and provide change in next consolidated TOE update (CTU).

(3) The mission assignee agency providing all users with disposition instructions and requesting that TAADS change be submitted to HQDA in accordance with AR 71-32.

(4) Item manager forwarding a TC recommendation including statement of concurrence to all IPR member agencies after the SKO has been withdrawn from all U.S. Army units.

4. Reprocurement.

a. Reprocurement provisions apply to items that are continually bought over their normal life cycle and to items that are additionally required sometime after initial buys and fielding are accomplished. Except as described below, re-procured items do not require separate TC, but assume the TC of the original item.

b. Reprocurement items should be separately type classified if improvements or modifications meet the criteria described in the paragraph 2 of the "Special TC Procedures" section above.

c. Items procured should have transportability approval affirmed by MTMC for all new makes and models.

5. Items developed jointly or for other military services, Government agencies, or foreign governments are subject to TC policies and procedures when acquired for U.S. Army use, unless waived (see AR 70-1). This decision is made by the appropriate MDA for this item. In this case, joint or Army test results should assure verification of Army performance and supportability requirements. Independent or additional Army testing should not be conducted unless there are unresolved test issues peculiar to the Army application.

6. Items used or developed by other services or countries (AR 70-1, paragraph 3-2.)

a. Items accepted for use by other Services or DoD agencies that can satisfy Army requirements will be acquired according to their approved acquisition strategies (AR 70-1). The acceptance decision of the user Service should support Army TC; however, Army TC STD prerequisites remain applicable for these items, unless waived by the MDA. Army testing should be limited to performance and supportability requirements not already demonstrated by prior developmental and operational testing.

b. Items accepted for use by other countries, which can satisfy Army requirements, will be acquired as in 6a. above, except that these items will be verified to meet special U.S. requirements (environmental, safety, or statutory) (AR 70-1).

c. Items currently under development by other Services, or DoD agencies or countries that can satisfy Army requirements, should be closely monitored to decide at what point the Army should begin acceptance procedures.

7. Termination of TC.

a. TC of an item is terminated when, after an item has been type classified, a decision is made through the ASARC/Army Uniform Board (AUB)/IPR process to terminate the program prior to procurement of any production items (AR 70-1).

b. The Army Materiel Status Record (TC section) and SB 700-20 must reflect the changed status. Explanatory information should be forwarded to the Army Materiel Status Office (AMCRDA-TE) for TC actions (see Figure 1-4).

c. When an item is erroneously listed as type classified in SB 700-20 but the official record indicates that the item was not intended to be separately type classified, action should be taken to correct the supply bulletin by deleting the item per AR 708-1. The request for deletion, with explanatory information, should be sent to the Army Materiel Status Office (AMCRDA-TE) for verification of referenced records prior to forwarding to HQDA USAFMSA, MOFI-FMA-SDC-A, 9900 Belvoir Road, Suite 120, Fort Belvoir, VA 22060-5578.

d. Type classified items should not otherwise be deleted from SB 700-20 until they have been type reclassified to obsolete.

TC Cataloging Activities

MATDEV/mission assignee agency should take the following actions in connection with item TC:

1. Submit a request for the assignment of an NSN to the Defense Logistics Services Center no later than 90 days prior to MDR (for example, IPR) where TC decision is planned. Provide copies of the requests for NSN and SLIN to HQDA (DAMO-FDR and USAFMSA-ADD and USAFMSA-RDD).

2. Request the assignment of a SLIN from LOGSA not later than 30 days prior to the scheduled IPR. The SLIN is not releasable until approved for publication in SB 700-20.

3. Not later than 15 days following the TC decision, an MSR should be submitted through Director, USAFMSA-RDD, 415 Sherman Avenue, Ft. Leavenworth, KS 66027-2300, to HQ AMC ATTN: AMCRDA-TE, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001, with copy furnished to Director, USAFMSA-ADD, 9900 Belvoir Road, Suite 120, Fort Belvoir, VA 22060-5578.

4. Submit the DA Form 3141 (Change to Army Adopted Items of Materiel and List of Reportable Items (SB 700-20)) to LOGSA to update and maintain SB 700-20 (AR 708-1).

Specific instructions and formats for recording materiel status actions are provided in Appendix XVI—Materiel Status Record, of this pamphlet.

USAFMSA has the responsibility to ensure that LINs recorded as a result of TC decision are properly recorded in requirements and authorizations documents for TOE/MTOE/BOIP/Inventory Control Point (ICP)/Consolidated TOE Update (CTU). MACOMs are responsible for TDA authorization documents.

1.6 Integrated Product Teams

Point of Contact: U.S. Army Materiel Command, ATTN: AMCRDA-TE, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001

References:

Federal Advisory Committee Act, Public Law 92-463, October 6, 1972, 5 USC Appendix 2, Section 3.
AR 15-1, “Boards, Commissions, and Committees, Committee Management.”
TRADOC Pam 71-9, “Requirements Determination.”
AMC Pamphlet 715-17, “Guide for the Preparation and Use of Performance Specifications.”

Integrated Product and Process Management (IPPM) is a management technique that integrates all activities from product concept through production/ field support, using a multifunctional team, to simultaneously optimize the product and its manufacturing and sustainment processes to meet cost and performance objectives. (See Part 4, para 4.2.) The process is normally implemented through the use of Integrated Product Teams (IPT).

An Integrated Product Team (IPT) is an integrated group of representatives from multiple functional disciplines working together to build successful and balanced programs, identify and resolve issues, and provide recommendations to facilitate sound and timely decisions. TRADOC forms Integrated Concept Teams (ICT) to develop and balance operational concepts and requirements. After requirements have been established, the ICT transitions to the MATDEVs IPT. The IPTs may be formed at any level with appropriate leadership. ICTs are led by the U.S. Army TRADOC and are equivalent to an IPT. Generally, once identification of requirements has been established, the ICT transitions to the MATDEV IPT except that ICTs develop and balance operational concepts and requirements. The ICT may be reconvened at a later date to refine requirements. IPTs work the cost, schedule and performance issues in development programs for a Program/Project/Product Manager (PM). The application of the guidance in the following paragraphs may be tailored, at the discretion of the PM, to match the scope and complexity of ACAT III and IV programs.

Note: Additional IPTs may exist during a program/project/ product's life (in other words, Test and Evaluation IPT, Software IPT, Materiel Release IPT, etc.). While the following guidance addresses some of the tasks covered by these IPTs, generally, the guidance only covers the program/project/product IPT responsibilities.

IPT membership should have complementary skills and represent all functional disciplines influencing the product throughout it life cycle. Team membership should be tailored for each product; membership stability should be emphasized. It is of utmost importance to have representation from all organizations that are potentially impacted or are involved with the product's acquisition process, to include joint or other-service organizations where joint interoperability may be of concern.

For further information refer to “Integrated Product and Process Management (IPPM)”, “Integrated Product and Process Development (IPPD)”, and “Integrated Product Team (IPT)” topics in the Defense Acquisition Deskbook.

Part 2
Program Definition

2.1 Purpose

Point of Contact: Director, Acquisition Policy (SAAL-RP), Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 2511 Jefferson Davis Highway, Arlington, VA 22202-3911

2.2 Intelligence Support*

Point of Contact: HQDA, Deputy Chief of Staff for Intelligence, 1000 Army Pentagon, ATTN: DAMI-CH, Washington, DC 20310-1000

* Per 5000.2-R, normally not applicable to Acquisition Category (ACAT) IA programs.

2.2.1 Evaluation of Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) Support

Point of Contact: Director of Information Systems for Command, Control, and Communications (DISC4), ATTN: SAIS-IAA-Q, 107 Army Pentagon, Washington, DC 20310-0107

2.3 Requirements Evolution

Point of Contact: HQDA, Deputy Chief of Staff for Operations and Plans, ATTN: DAMO-FDJ, 400 Army Pentagon, Washington, DC 20310-0400

References:
CJCSI 3170.01 (Formally MOP 77), “Requirement Generation System Policies and Procedures.”
AR 71-9, “Materiel Requirements.”
TRADOC Pam 71-9, “Requirements Determination.”

See referenced publications for information regarding requirements evolution.

2.3.1 Evaluation of Requirements Based on Commercial Market Potential

Point of Contact is the same as paragraph 2.3.

References:
AR 71-9, “Materiel Requirements.”
TRADOC Pam 71-9, “Requirements Determination.”

See referenced publications for information regarding evaluation of requirements based on commercial market potential.

2.3.2 Strategic Requirements Consideration

Point of Contact is the same as paragraph 2.3.

2.3.3 ORD to RFP Crosswalk (This paragraph is not present in DoD 5000.2-R.)

Point of Contact: Commander, TRADOC, ATTN: ATCD-RP, Ft. Monroe, VA 23651-5000

References:
AR 71-9, “Materiel Requirements.”
TRADOC Pam 71-9, “Requirements Determination.”

The Combat Developer (CBTDEV) and Program Manager / Materiel Developer (PM/MATDEV), or Training Developer (TNGDEV) and PM/MATDEV for non-system training devices (NSTD), conducts an Operational Requirements Document (ORD) to Request For Proposal (RFP) crosswalk to verify that the RFP (to include system specification or purchase description, and the Statement Of Work (SOW)) accurately reflect all capabilities requirements and program support stated in the approved ORD. The crosswalk is conducted prior to Milestone (MS) I, II, and III decision reviews and any Army Systems Acquisition Review Council (ASARC) or In Progress Review (IPR) applicable to a Pre-Planned Product Improvement (P3I) or proposed system modification/upgrade that results in or responds to a revised ORD. The system independent evaluator (in other words, the Operational Test and Evaluation Command (OPTEC)) also participates in the crosswalk. The CBTDEV and PM/MATDEV (TNGDEV and PM/MATDEV for TADSS) certifies by a method outlined by the appropriate decision authority (for example, a briefing, memorandum, email, or other communications) that the RFP has been crosswalked with the ORD and is in agreement prior to the ASARC or program review.

The ORD to RFP Crosswalk is documented in accordance with Table 2-1. The CBTDEV/TNGDEV documents the threshold and objective values of the ORD requirements (paragraph 4 and 5) and identifies which

ORD requirements are key performance parameters (KPPs). The PM/MATDEV documents all RFP requirements applicable to the ORD requirements. The CBTDEV, TNGDEV, and PM/MATDEV documents reasons for differences between ORD and RFP (for example, exit criteria for MS II, approved growth program at MS III for other than KPP, oversight as a result of concurrent ORD and RFP development activities). The OPTEC independent evaluator documents the impact of differences on testing. The PM/MATDEV also identifies RFP requirements that have been added to meet MATDEV unique standards (laws, directives, regulations, etc).

The purpose of the crosswalk is to ensure that the RFP accurately reflects the ORD capability requirements and program support for the next acquisition phase and notify the decision review (ASARC/IPR) considering entry into the next phase. When the crosswalk indicates that the RFP does not accurately reflect the approved ORD, the MATDEV is expected to modify the RFP to reflect the ORD.

For ACAT I, IA, II, and IIA programs, the principal CBTDEV/TNGDEV coordinates the crosswalk results with the proponent Commander / Commandant (CDR/CMDT) and the Headquarters (HQ) Training and Doctrine Command (TRADOC) Deputy Chief of Staff for Combat Developments (DCSCD) (Deputy Chief of Staff for Training (DCST) for NSTD). Electronic mail coordination is encouraged. If there are no unresolved issues based on this coordination, the CBTDEV and PM/MATDEV (normally TRADOC Systems Manager / TRADOC Program Integration Office (TSM/TPIO) and PM) jointly certify to the HQDA Deputy Chief of Staff for Operations and Plans (DCSOPS), ASARC Chair person, and Army Acquisition Executive (AAE) that the crosswalk has been completed and the RFP accurately reflects the approved ORD. Unresolved issues are raised to appropriate CBTDEV/TNGDEV and PM/MATDEV general officer (for example, CDR Research, Development and Engineering Center (RDEC) and Program Executive Officer (PEO)) level for resolution and certification that RFP reflects the ORD. The specific general officers involved in the resolution are determined during coordination with proponent CDR/CMDT and HQ TRADOC DCSCD (DCST for NSTD).

For ACAT III, IIIA and IV, the crosswalk is at the proponent level. The CBTDEV (TNGDEV for NSTD), MATDEV and system-independent evaluator (OPTEC) are represented. The sample format in Table 2-1 applies. The proponent CG, CMDT, or Director of CBTDEV/TNGDEV, as determined appropriate, reviews the results. If the RFP accurately reflects the ORD requirements, the CBTDEV/TNGDEV and MATDEV verifies to the IPR chairperson and designated MDR authority stating that the RFP accurately reflects the ORD. The verification must be provided prior to conduct of the IPR.

Table 2-1.
Sample Format for ORD to RFP Crosswalk

ORD to RFP Crosswalk for System X or Applicable Modification at Milestone Decision Review/ASARC/DAB/IPR

Requirement in ORD (sequential)	Statement(s) in RFP	Rationale For Difference and Associated Operational Impact (If Any)	Testing Impact (If Any)
* An ORD requirement that is a KPP			

2.4 Analysis of Alternatives (AoAs)

Point of Contact: HQDA, Deputy Chief of Staff for Operations and Plans, ATTN: DAMO-ZDS, 400 Army Pentagon, Washington, DC 20310-0400

Reference: TRADOC Pam 71-9, “Requirements Determination.”

The Training and Doctrine Command (TRADOC) normally conducts AoAs to assist the Milestone Decision Authority (MDA) to determine at the MS I review whether any of the proposed alternatives to an existing system offer sufficient military or economic benefit to warrant a new program start. If a new program is approved, the AoA helps identify alternatives that are refined by cost performance trade-off studies during Program Definition and Risk Reduction (Phase I). The MDA may direct updates to the AoA for subsequent decision points, if conditions warrant (for example, an AoA may be useful for examining cost-performance trades at MS II).

AoAs illuminate the relative advantages and disadvantages of alternatives being considered by identifying sensitivities of each alternative to possible changes in key assumptions (threat, etc.) or variables (selected performance capabilities, etc.). AoAs provide insights regarding KPPs for preferred alternative(s) and indicate how these parameters contribute to increases in operational capability. Additionally, AoAs determine opera-

tional effectiveness and costs (including estimates of life cycle costs and training and logistics impacts) for all alternatives and identifies opportunities for trade-offs among performance, costs, and schedules.

The focus of AoAs is on broad operational capabilities, conceptual technology, and materiel solutions that could satisfy the Mission Needs Statement (MNS). The AoA considers a full range of materiel alternatives (primarily provided by the MATDEV). These alternatives may include the currently fielded system (the base case), a modified current system, programmed Army systems (the program baseline), other Services' systems (existing or programmed), non-developmental items, cooperative (allied) developmental systems, and conceptual systems.

The AoA depends on inputs from other analyses, such as requirement trade-offs, system performance analyses, concept evaluations, technology trade-off studies, and cost studies. Measures of effectiveness (MOEs) and measures of performance (MOPs) play a vital part in linking AoAs, the Acquisition Program Baseline (APB), the Operational Requirements Document (ORD), and the Test and Evaluation Master Plan (TEMP). AoA measures of effectiveness should be developed to quantify how well alternatives satisfy the operational need qualitatively described in the MNS.

2.4.1 Preparation Responsibilities

Point of Contact is the same as paragraph 2.4.

References:
AR 5-5, “Army Studies and Analysis.”
TRADOC Pam 71-9, “Requirements Determination.”

HQDA ODCSOPS, in coordination with the Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA(ALT)), usually tasks TRADOC to perform AoAs for Acquisition Category (ACAT) I and II programs. TRADOC then tasks / appoints an independent analysis team to conduct the AoA. TRADOC usually tasks the TRADOC Analysis Center (TRAC) to conduct AoAs that support ACAT I and some ACAT II programs. If the effort is programmed in the AR 5-5 Study Program, then the annual publication of the TRADOC Study Program (TSP) serves as the study tasker. The CBTDEV concept proponents are responsible for conducting the remaining ACAT II, III, and IV program AoAs, if required by the MDA.

The independent analytic team conducting the AoA takes direction from TRADOC and, if formed, guidance from the HQDA Study Advisory Group (SAG) or, for a Joint AoA, the Joint Oversight Board (JOB). Specific requests for significant additional or modified analytic requirements are processed through TRADOC. The CBTDEV Integrated Concept Team (ICT) can help scope the AoA and expedite analysis efforts and, while the AoA study team participates in the ICT, the ICT does not have tasking authority over the independent AoA study team for ACAT I and ACAT II programs.

The analysis team usually includes members from both the TRADOC and the Army Materiel Command (AMC) communities. The TRADOC representatives usually include the CBTDEV and TRAC. AMC supports the study with representatives typically from the MATDEV; RDEC Labs; and the Army Materiel Systems Analysis Activity (AMSAA). The MATDEVs and RDECs supply system specific cost and performance data, and results of engineering studies for input to the study.

AoAs for ACAT I and II programs usually take 12-15 months to complete. Project analysis requirements early to ensure analysis resources are available. Key resource drivers are study issues, methodology, and data requirements. Development of a plan to identify the data requirements, data sources, and the data supply schedule is a key element of the study plan. AMSAA assists the study team to identify and develop data requirements and sources. AMSAA provides certified data for the AoA as required by TRADOC.

If an AoA is not required for an ACAT III or IV program, the CBTDEV maintains an audit trail of the materiel need determination process and requirements / operational analyses conducted to provide the analytic underpinning for the ORD.

2.4.2 Milestone Decision Reviews

Point of Contact: Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 103 Army Pentagon, ATTN: SAAL-ZD, Washington, DC 20310-0103

2.5 Affordability

Point of Contact: Office of the Assistant Secretary of the Army (Financial Management and Comptroller), ATTN: SAFM-BUI, 109 Army Pentagon, Washington, DC 20310-0109

2.5.1 Full Funding of Acquisition Programs Reviewed by the Defense Acquisition Board (DAB) or Information Technology Overarching Integrated Product Team (IT OIPT)

Point of Contact is the same as paragraph 2.5.

Reference: OMB Circular A-11, "Preparation and Submission of Budget Estimates."

The requirement for presenting the full funding for an acquisition program — that is the total cost for developing, procuring and sustaining a given system as reflected in the most recent Future Year Defense Program (FYDP) — is not restricted to ACAT I or ACAT IA programs only. The requirement pertains to all acquisition programs, whether dealing with programs that have been designated as ACAT II (with total estimated research and development in excess of $140 million and procurement in excess of $645 million (FY96 constant dollars)), or ACAT III and below, where the review forum would remain within the Army.

The policy of full funding as applied to systems acquisition is derived from OMB Circular A-11, which is the Government's official guidance on the preparation and submission of budget estimates to Congress. Presenting to Congress the full costs for an acquisition program, to include the time frame over which such acquisition is anticipated, provides Congress a better basis for authorizing/appropriating funds for that program; whether this is done through annual incremental appropriations toward the full cost of the program or with the provision of advance or multi-year funding.

2.6 Supportability

Point of Contact: HQDA, Office of the Deputy Chief of Staff for Logistics, 500 Army Pentagon, ATTN: DALO-SMM, Washington, DC, 20310-0500

Reference: AR 700-127, "Integrated Logistic Support."

Performance is defined as those operational and support characteristics of the system that allows it to effectively and efficiently perform its assigned mission over time. The support characteristics of the system include both supportability aspects of the design and the support elements necessary for system operation. Supportability is the degree to which system design characteristics and planned logistics resources meet system peacetime readiness and wartime utilization requirements. Therefore, supportability becomes an essential function of performance. System Managers and Integrated Logistics Support Managers (ILSMs) stress the importance of supportability up front in the materiel acquisition process. The single most important aspect of ILS is design influence, which is accomplished within the system engineering process. Influencing design up front has a significant impact on future Operations and Support (O&S) costs, considering that O&S costs comprise 60%-70% of a weapon systems Life Cycle Cost (LCC). When evaluating performance, System Managers, Life Cycle Software Engineer Centers (LCSECs), and ILSMs take into account supportability and its everlasting effect on the LCC of a weapon system.

2.7 ~~Advanced Concept Technology Demonstrations (ACTDs)~~ (Science and Technology Development, Demonstration, and Transition Information)

Point of Contact: Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 103 Army Pentagon, ATTN: SAAL-ZT, Washington, DC 20310-0103

References:
Army Science and Technology Master Plan, Fiscal Year 1998.
TRADOC Pam 71-9, "Requirements Determination."
Deputy Assistant Secretary for Research & Technology, ASA(RDA), memorandum, subject: "Science and Technology (S&T) Development, Demonstration, and Transition Policy," March 25, 1998.

This section provides procedural guidance for Science and Technology (S&T) planning and execution including, but not limited to, technology development and demonstration, prototyping, and transition. This guidance also pertains to Special Access Programs (SAPs) within the S&T program. (See DoD 5000.2-R, Part 4, paragraph 4.4.5)

The Army Science and Technology program consists of 6.1 basic research, 6.2 applied research, and 6.3 advanced technology development programs, and include S&T SAPs. The following topics describe key attributes of the Army's S&T program.

1. **Army Science and Technology Master Plan (ASTMP).** The ASTMP provides explicit, resource-constrained guidance to the Army's science and technology organizations, consistent with the National Military Strategy, Defense Planning Guidance, and the Army's force modernization plans to achieve a trained and ready modern Army. Updated annually and published by the Deputy Assistant Secretary for Research and Technology (DAS(R&T)) and approved by the Secretary of the Army and Chief of Staff, Army, the ASTMP:

a. Provides top down guidance to the Army S&T community;

b. Enhances the leveraging of other service, industry, and academia investments;

c. Responds to DA, DoD, White House, and Congressional guidance/interests;

d. Focuses S&T investment at critical mass level on relevant technologies;

e. Significantly improves science and technology stability, quality, relevance, and efficiency;

f. Achieves more support for the S&T investment through an improved understanding of the Army's investment strategy and plans; and

g. Addresses the Army's complete S&T program from a variety of perspectives: budget program category (viz., 6.1, 6.2, 6.3); Defense and Army technology areas; science and technology investment in support of the Army Modernization Plan; supporting capabilities; and technology transfer and leveraging. ASTMP Volume II contains a finite set of funded, high priority Science and Technology Objectives (STOs) as well as descriptions of Army Advanced Technology Demonstrations (ATDs).

2. Science and technology vision. The Army's S&T vision ensures:

a. Timely demonstration of affordable technology/weapon system concepts that enable:

(1) Decisive overmatch with minimum casualties.

(2) Force projection with full spectrum capabilities.

(3) Requirements definition/prioritization through experimentation.

b. S&T that reduces cost through:

(1) Early retirement of risk in materiel development programs.

(2) Support for acquisition reform.

c. World-class network of Army-focused government and private S&T that:

(1) Maintains land warfare superiority.

(2) Leverage commercial technology.

(3) Maintains smart buyer capability.

(4) Enables Army After Next (AAN).

3. Science and technology agenda. The Army's S&T agenda is to:

a. Conduct “world class” research and pursue technologies relevant to the Army, aided by peer review and cooperative research and development (R&D) agreements.

b. Comply with Defense and Army S&T vision and strategy, guided by a funding-constrained ASTMP.

c. Strengthen the requirements process through intensive linkage with the Training and Doctrine Command (TRADOC) Battle Labs and Advanced Concepts and Technology II (ACT II), aided by advanced distributed interactive simulation, ATDs, and Advanced Concept Technology Demonstrations (ACTDs).

d. Improve technology transition and transfer.

e. Improve efficiency by stabilizing S&T priorities and funding.

f. Improve program execution and oversight.

g. Attract, develop, and retain quality scientists and engineers.

h. Downsize the S&T infrastructure while improving focus, productivity, and quality.

4. Army Science and Technology Advisory Group (ASTAG); Army Science and Technology Working Group (ASTWG); and the ASTWG Technical Council. The Army S&T program receives its broad management direction and focus from four executive level groups:

a. The Army Science and Technology Advisory Group (ASTAG) provides four-star level oversight of the Army S&T program and is co-chaired by the Assistant Secretary of the Army (Acquisition, Logistics and Technology) and the Vice Chief of Staff, Army. Members of the ASTAG are listed at Figure 2-1.

b. The Army Science and Technology Working Group (ASTWG) is co-chaired by the DAS(R&T) and the Assistant Deputy Chief of Staff for Force Development (DCSOPS(FD)). The ASTWG provides two-star level resolution of pressing S&T issues prior to meetings of the ASTAG; recommends to the ASTAG revisions to the Army's S&T vision, strategy, principles, and priorities; and reviews and approves new and continuing ATDs and STOs. The ASTWG membership is listed at Figure 2-1.

c. The ASTWG Technical Council is chaired by the DAS(R&T). It provides technical and acquisition expertise to the ASTWG; provides technical guidance to and oversight of ongoing ATDs; and reviews and recommends continuing and new STOs to the ASTWG for approval. In addition, the Technical Council serves as an Overarching Integrated Product Team (OIPT) which reviews the draft Advanced Technology Demonstration Management Plan (ATDMP) and recommends ATDs for ASTWG approval.

Army Science and Technology Advisory Group Membership

Assistant Secretary Army of the Army, Acquisition, Logistics and Technology (Co-Chair)
Vice Chief of Staff, Army (Co-Chair)
Commanding General, TRADOC
Commanding General, Army Materiel Command
Assistant Vice Chief of Staff, Army
Deputy Chief of Staff, Operations and Plans
Deputy Chief of Staff, Personnel
Deputy Chief of Staff, Logistics
Deputy Chief of Staff, Intelligence
The Surgeon General
Director, Army Staff
Deputy Under Secretary of the Army for Operations Research
Director, Information Systems for Command, Control, Communication, and Computers
Commanding General, U.S. Army Corps of Engineers
Commanding General, Space and Missile Defense Command
Deputy Assistant Secretary (Research and Technology)

Army Science and Technology Working Group Membership

Deputy Assistant Secretary (Research and Technology) (Co-Chair)
Assistant Deputy Chief of Staff for Operation and Plans (Force Development) (Co-Chair)
And representatives form the following organizations:
Office of the Assistant Secretary Army, Acquisition, Logistics and Technology, SAAL-ZS
HQ U.S. Army Training and Doctrine Command
HQ U.S. Army Materiel Command
Medical Research and Materiel Command
Space and Missile Defense Command
U.S. Army Corps of Engineers
Office of the Deputy Chief of Staff, Personnel
Office of the Assistant Chief of Staff, Installation Management
Office of the Deputy Chief of Staff, Logistics
Office of the Deputy Chief of Staff, Intelligence
Office of the Director, Information Command Control, Communication and Computers
U.S. Army Special Operations Command
Army Digitization Office
Program Analysis and Evaluation

Figure 2-1. ASTAG and ASTWG Membership

d. The Environmental Technology Technical Council (ETTC) is co-chaired by the Director of Research and Laboratory Management, Office of the DAS(R&T), and the Deputy Assistant Secretary (Environment, Safety and Occupational Health), Office of the Assistant Secretary (Installation and Environment). The ETTC reviews and recommends continuing and new environmental quality (EQ) STOs to the ASTWG for approval. It also functions as an OIPT for EQ ATDs to be submitted to the ASTWG for approval.

5. Technology transition. The transition point from the demonstration of technology in one or more S&T projects to a formal acquisition program for a new system occurs at Milestone I when a program begins the program definition and risk reduction phase. This occurs after a validated need has been approved at Milestone 0, and technologies critical to performance have been proven. Technologies, once proven, can also be inserted into existing acquisition programs from S&T at predetermined points in the 6.4,6.5, and acquisition

phases as specified in the acquisition strategy of that program. Either transition method—into a new acquisition program or into an existing one—requires coordination of the S&T developer, the systems manager/PM, and the combat developer. Prior to transition from S&T, the following criteria must be met:

a. The technologies have been demonstrated, thoroughly tested, and shown to be predicable.

b. There is a clear and verified military need for the new capability system or system upgrade.

c. The new capability system or system upgrade is cost effective.

Procedures

Key elements in the process of managing the Army Science and Technology program include—-

1. Strategic Research Objectives (SROs): The Army Basic Research program supports a set of SROs that reflect the high-payoff potential of newer but maturing research fields. Six established SROs and four emerging SROs focus 30% of 6.1 investments on research activities considered to offer significant and comprehensive benefits for achieving the emerging capabilities of AAN. The SRO process is depicted at Figure 2-2. Procedures for the establishment of SRO(s) are as follows:

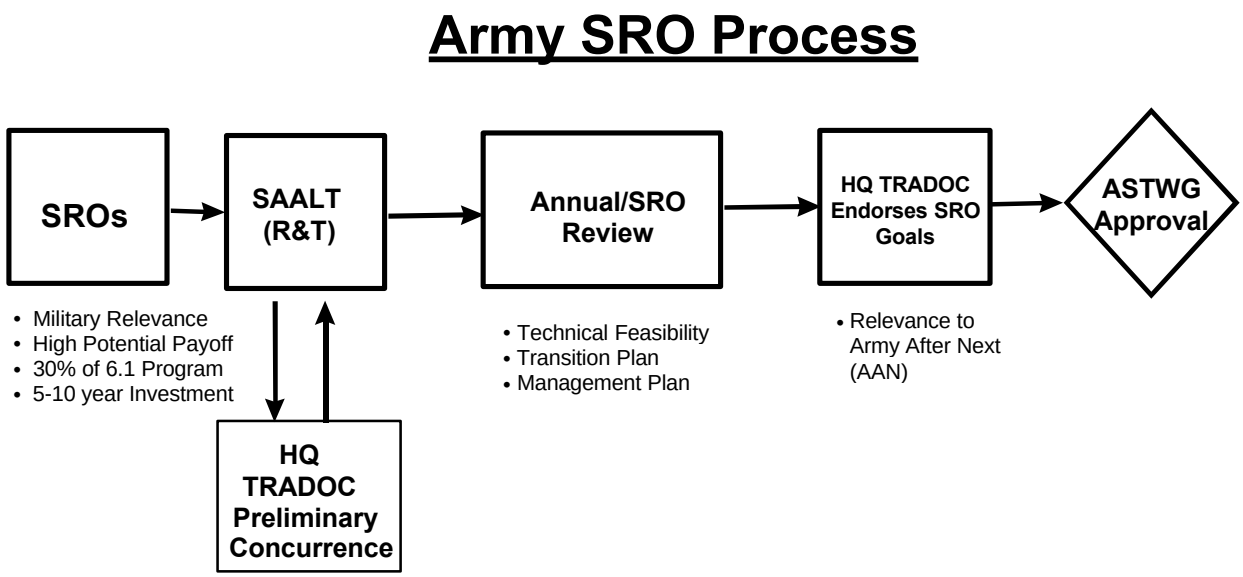


Figure 2-2. SRO Process

a. The Office of the DAS(R&T) will establish a date for the annual SRO review.

b. SAALT (SAAL-TR) will review the SRO Management Plan—addressing technical objectives accomplishments and transition plan and coordinate with HQ TRADOC (Office of the Deputy Chief of Staff Combat Developments (DCSCD) and Office of the Deputy Chief of Staff Doctrine (DCSDOC)) to ensure military relevance, and support of the SRO goal.

c. Upon obtaining HQ TRADOCs final concurrence, the SRO/Management Plan will be presented to the ASTWG. Final approval will be provided by the DAS(R&T).

2. Science and Technology Objectives (STOs). The Army has three variants of STOs:

a. A STO is a significant, reasonably predictable science and technology achievement, fully funded by 6.2 and/or 6.3 resources, which is described by one or more specific, quantified technical objectives to be achieved by a specific fiscal year. A STO manager will be assigned by the responsible R&D MACOM to manage and be accountable for the timely achievement of each STO. STOs are originated, updated, and approved as part of the normal revision cycle of the ASTMP. Work activities can cover the full range of science and technology, except basic research. The STO should be achieved within at least three years of initiation but can cover up to six years (in other words the POM) if near-term, one to three year intermediate milestones are identified. All STOs must include measurable and quantifiable results. STOs and their timely accomplishment will be a basis for performance assessment of the responsible/assigned STO manager.

b. **Provisional STO (STO(P)):** The sole purpose of a STO(P) is to allow a small number of Army programs to show extended funding streams as part of Defense Technology Objectives (DTOs). The following rules will apply to STO(P):

(1) The Basic STO will end successfully during the POM and has a funded, focused, follow-on S&T program in a similar area (the STO(P)) with sufficient significance to compete eventually as a STO in its own right.

(2) Each STO(P) must be nominated following the same vetting process through major command and TRADOC, leading to ASTWG approval. The number of STO(P)s will be capped at 25, allocated by command proportional to the current STO allocation.

(3) The year before the STO(P) is due to begin (also the last year of its predecessor STOs funding) the STO(P) must be re-nominated as a normal STO and compete against other STO nominees.

(4) An approved STO(P) will not be counted against a command's STO allotment until it re-competes successfully as a STO.

(5) A STO(P) will not enjoy the same funding protection in the Army's Program Planning Budget Execution System as a STO or AAN STO.

c. **AAN Enhanced STO:** The AAN STO Enhancement Program adds funds to new Lab/RDEC STO programs that are particularly relevant to AAN to foster private sector participation in these programs. Materiel developers respond by submitting 6.2 STO proposals as part of the standard STO submission process. Only new STOs can participate. An AAN STO submission must explain how it supports the AAN Technology Short List that is published annually by HQ TRADOC. AAN Enhanced STOs have two components: the fully funded STO; and the AAN Enhancement. Enhancement funds are expected to be no more than 1/3 to 1/2 of the total STO funding (STO plus enhancement), but may not exceed not more than $1M per year per STO. Enhancement funding covers the full period of the AAN STO and represents an out year commitment of the enhancement fund. The following procedures apply:

(1) The materiel developer submits the STO and its potential enhancement responsive to the AAN technology short list through the normal STO process.

(2) Once all STO proposals (STO, and AAN STOs) are voted on at the TRADOC hosted STO Review, they are prioritized and a cut-line established so that all ending current year STOs are replaced by an equal number of approved proposed STOs and the overall yearly total does not exceed 200. HQ TRADOC, DCSDOC then prioritizes just those AAN Enhanced STOs that are above the cut-line.

(3) The prioritized proposed STO list with cut-line is forwarded to the ASTWG Technical Council. This includes the AAN enhanced STO list. The Technical Council recommends allocation of AAN 6.2 STO enhancement funds to AAN STOs according to the priority set by HQ TRADOC, DCSDOC.

(4) The ASTWG will provide final approval of STO enhancement fund allocation.

3. Advanced technology demonstration (ATD). A vital part of the S&T program, ATDs help speed the maturation of advanced technologies needed to upgrade existing systems and enable development of next generation and future systems, allowing experimentation with technology-driven operational issues; and resulting in a more informed requirements document prior to Milestone I decisions. ATDs bring the CBTDEV, MATDEV, and industry together to explore the technical feasibility, affordability, and potential of technologies to support current and emerging warfighting concepts. ATDs permit exploration of technical options and the elimination of unattainable technologies in the early stages of a program. This is accomplished through an Integrated Product/Process Development (IPPD) team, which is mandatory for all ATDs. ATDs ensure a higher probability of success when technology is transitioned to a formal acquisition program. The ATD process is depicted in Figure 2-3. A more detailed display of the overall ATD Nomination and Approval process is at Figure 2-4. Mandatory elements that must be addressed when nominating an ATD are in Figure 2-5. Specific requirements for an ATD are:

- An approved STO;
- A planned program duration of no more than three to five years (in other words, a finite length rather than a continuing effort);
- A planned program fully funded, largely by 6.3, and endorsed by its materiel developer;
- A fully developed and coordinated ATD Nomination (ATDN);
- CBTDEV and MATDEV agreement on the Exit Criteria, with TRADOC proponent agreement that the stated minimum performance is militarily significant;

- Active participation by the CBTDEV (Director of Combat Development and/or Battle Lab) in the demonstration/field test/simulation;
- Potential for new or enhanced military operational capability or cost effectiveness not covered by another program;
- A baseline technical approach that has a reasonable chance of success (in other words, the components are available);
- Appropriate MANPRINT considerations, tailored to the scope and nature of the technology demonstration, are made by the ATD manager.
- A reasonable chance of technology transition out of S&T after the ATD (is it affordable, is the target system for transition funded in the POM, etc.); and
- Compliance with the Joint Technical Architecture—Army (if applicable).

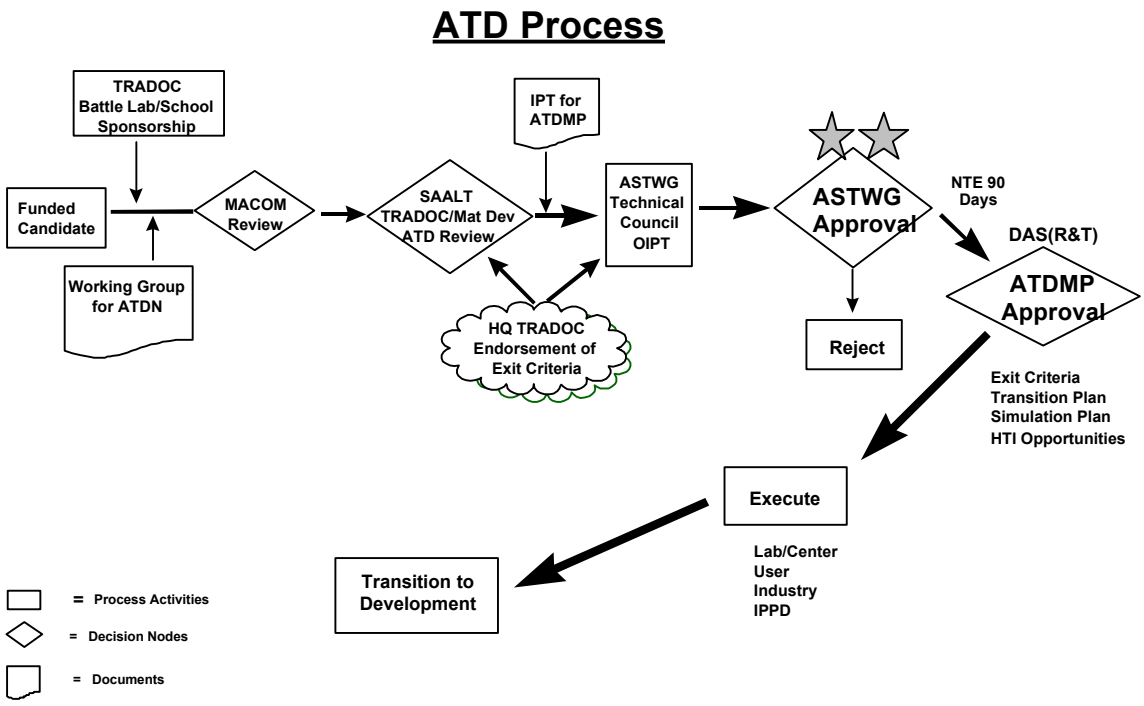


Figure 2-3. ATD Process

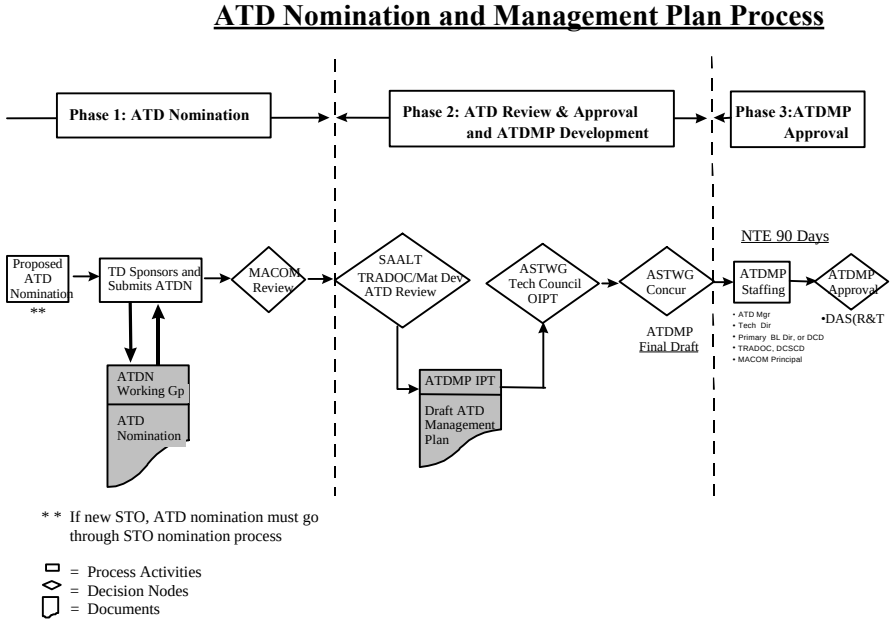


Figure 2-4. ATD Nomination and ATD Management Plan Process

Advanced Technology Demonstration Nomination (ATDN) and Advanced Technology Demonstration Management Plan (ATDMP)

(Ten pages maximum, exclusive of annexes)

1. Title: Proposed ATD title. Provide also the existing or proposed nomination STO number.

2. Objective:

a. Purpose and Goal: A concise statement of the ATDs overall purpose and goal including the operational context.

b. Technical Concept: A short description of the technologies to be demonstrated.

c. Demonstration Concept: A short description of the planned experimental environment.

3. Description: A short, easily understood executive summary of the ATD. Avoid acronyms and technical jargon. Use clear English.

4. Need, Significance, and Opportunities:

a. Army Need: A short description of the future capabilities required and the materiel or operational deficiencies that are addressed by the ATD.

b. Military Significance: A short description of the operational payoffs. This includes descriptions of the improvements to an existing capability, and/or the new operational capability and the implications related to affordability, cost, maintainability, and sustainability. Include any other relevant issues.

c. Horizontal Technology Integration (HTI) Opportunities: Identify HTI opportunities. HTI is the common application of standardized components and subsystems across multiple systems to reduce life cycle cost and increase total force effectiveness.

5. Execution Plan:

a. Exit Criteria: Define and describe the ATD exit criteria. Provide a narrative description for each parameter and explicitly describe all assumptions. Include clear definition of characteristics and rationale. If applicable, address compliance with Joint Technical Architecture—Army as an exit criterion for all ATDs. More information on this requirement can be found at the following homepage: www.hqda.army.mil/techarch. When Exit Criteria require classification, include a classified annex with all specifications detailed.

Figure 2-5. ATD Nomination and ATD Management Plan Format

b. Proposed Program by Fiscal Year (FY) with Major Milestones: Show ATD major milestones/time lines in a tabular or Gantt chart format, including proposed TRADOC experiment(s), accurate to within a quarter of a FY.

c. Funding Required: Show funding required by FY, by Program Element (PE)/ Project. Identify any shortfalls and approaches to resolution of shortfalls. The program must be funded prior to approval.

d. Technology Maturity: Describe the maturity of key components and identify any improvements needed before ATD start and how these would be accomplished.

e. Leveraging: Identify and describe the technology and/or resources external from the Army used in this ATD from the other services, DoD and non-DoD agencies, universities, non-profit organizations, federal labs, U.S. industry, and foreign sources. Describe any dependencies (specific deliverables, needed performance levels, and delivery dates) on programs (Army or not) external to the ATD. (Required in the ATDMP only.)

f. Risk Management and Mitigation: (Required in ATDMP only.)

(1) ATD Execution Risk. Provide a narrative summary of the ATD risks and a risk mitigation approach for each of the following: technical, cost (are funds adequate considering the risk identified), and schedule.

(2) Acquisition Program Risk. Identify the potential benefits and opportunities to the PMs to transition the technology of the ATD. Identify any transition risks for the technology developed by the ATD.

(3) Cost Risk. Assess affordability and manufacturability risks.

(4) Risk Mitigation Plan. Provide details of the risk mitigation effort.

g. Planned Warfighter Participation: Identify the warfighting experiments with appropriate Battle Labs and other users including the operational environment for the demonstration.

h. Principal Performers and Roles: Identify the points of contact (POCs), e.g., ATD Manager, the TD, Battle Labs (BL) or Director of Combat Developments (DCD), and other participants as appropriate by name, organization, office symbol, telephone, and fax numbers, and electronic mailing address. List also the Government, and academic groups who will perform the ATD support functions. When the ATD is dependent on products developed outside of the direct management of the ATD Manager, attach an appendix identifying the individuals, and their organizations responsible for the delivery of these products.

i. Logistics Implications: Indicate the ATDs logistics impacts on transportation, storage, or distribution; is there improvement in response time for resupply, weight reduction, and fuel consumption improvements, etc. (Required in ATDMP only.)

j. Integrated Product and Process Development (IPPD) Plan: Describe the plan for implementing the IPPD process, the elements of that process, and the plan for including IPPD in the contracting statement of work. IPPD progress will also be a mandatory topic at annual ATD reviews. (Required in ATDMP only.)

6. Sponsorship/Endorsement: Identify the sponsor(s) and/or the endorsing organization. Outline the support/interest of TRADOC and the PM to whom the ATD might transition. For the ATDMP only, include a concurrence sheet showing the name (minimum O-6 level), organization, office symbol, telephone and fax numbers, and electronic mailing address of the BL, DCD, HQ TRADOC, DCSCD, etc.

7. Transition Plan Summary: List windows of opportunity to transition the ATD technology (components, subsystems, and software) into new or existing systems, as well as outlining the interest and support of the combat developer and the PM(s) for the technology. If HTI opportunities are identified, describe planned efforts to aid in planning HTI transition or designation.

a. Joint Technical Architecture—Army: Address the relationship between the ATD and the Joint Technical Architecture—Army.

b. Contracting/Acquisition Strategy: Address the contracting/acquisition strategy for the ATD. (Required in ATDMP only.)

c. Potential Army Acquisition Program Manager: Identify the potential Army Acquisition System/Program Manager(s) that may transition the technology (viz., to whom will the successfully demonstrated technology transition for implementation?). (Required in ATDMP only.)

8. Relationship to Other Service or Agency Related Programs: Identify the ATDs relationship to any other service/DARPA/national Labs/OSD programs that appear to be related to the ATD or that have developed relevant “seed” technology. Address any program relationships that could be perceived as duplication or complementary.

9. Other Considerations: Address other issues not included above but considered important.

Figure 2-5. ATD Nomination and ATD Management Plan Format (continued)

10. Quad Chart: A summary of nomination information in a quad-chart format with each quadrant showing (clockwise from upper left hand corner): (1) objective and justification including Battle Lab and System/PM support, (2) proposed concept (picture or diagram), (3) approach and applications, and (4) program schedule and funding. The quad chart should be digital and hard copy.

11. Simulation Support Plan (SSP) Summary: If an ATD includes significant simulations/simulator support as part of the execution plan, then a SSP must be developed as an annex within the ATDMP. The format for the SSP is at Figure 2-6.

12. Concept Diagram: A Color and Black & White concept diagram or photo (digital and hard copy) to represent the ATD in viewgraph form.

Figure 2-5. ATD Nomination and ATD Management Plan Format (continued)

a. **ATD nomination and approval process:** The ATD nomination and approval process is comprised of three phases: the ATD Nomination Phase, the ATD Review and Approval/ATD Management Plan (ATDMP) Development Phase, and the ATDMP Approval Phase. The steps in each phase are described below.

(1) ***ATD Nomination Phase:***

(*a*) The Deputy Assistant Secretary for Research and Technology will issue a call for the nomination of new ATDs to all R&D MACOMS.

(*b*) The Technical Director (TD) will submit a funded, combat developer sponsored, ATD candidate to their MACOM. The TD will also establish a working group, in coordination with the HQ TRADOC, Office of the DCSCD, to develop the ATDN. The composition of the working group will include all the key stakeholders, for example, TRADOC, the System/PM to whom the ATD might transition, and others as appropriate. The TD and the Working Group will ensure the ATDN has fully considered: 1) horizontal technology and requirements integration; 2) technical soundness, 3) affordability, including life cycle cost, 4) likelihood for transition , 5) likelihood of success given the resources and opportunity for leverage, and 6) opportunity for major technical advancement and potential for leap ahead/break through capability.

(*c*) The ATDN will follow the format at Figure 2-5. A key element of the development of the ATD nomination is early development of exit criteria through teaming of stakeholders.

(*d*) The MACOM will perform a review of the ATDN prior to presenting the ATD nomination to the SAALT/TRADOC/Materiel Developer (S/T/MD) ATD Review.

(2) ***ATD Review and Approval/ATDMP Development Phase:***

(*a*) Each MACOM will present its ATD nomination and proposed IPT membership to the S/T/MD ATD review. Using the requirements in the ATD paragraph above as a checklist, the S/T/MD ATD Review will determine which ATD nomination(s) proceeds to the ASTWG Technical Council OIPT for consideration. The S/T/MD Review will approve the proposed IPT membership list.

(b) For ATD nominations approved at the S/T/MD ATD Review, the nominating ATD Manager will establish the approved Integrated Product Team (IPT) to develop the ATDMP for ASTWG Technical Council OIPT review. The IPT will include the key stakeholders, for example, the RDECs; MACOM; Combat Developer; Operational Test and Evaluation Command (OPTEC); Simulation, Training, Instrumentation Command (STRICOM) as appropriate; and the likely transition PM/System Manager. A key element of the ATD development is endorsement of exit criteria by HQ TRADOC by the time of the ASTWG Technical Council OIPT review.

(*c*) The ATDMP, developed from the ATDN, will follow the format at Figure 2-5. The matrix at Table 2-2, indicates which paragraphs are to be completed for each document. The ATDMP, exclusive of annexes or appendices, will not exceed ten pages.

(*d*) The ASTWG Technical Council OIPT will recommend ATDs for ASTWG approval based upon the ATDMP.

(e) The ASTWG will review the ATD nomination for final approval.

(3) ***ATDMP Approval Phase:***

(*a*) Upon ATD approval, the ATDMP will be submitted for approval to the DAS(R&T) within 90 days unless the ASTWG grants an extension.

(b) The ATD Manager is responsible for the complete staffing of the ATDMP until it is approved by the DAS(R&T). Electronic staffing and coordination will be used to the maximum extent possible.

(c) The ATDMP will have the following signatures: ATD Manager, Lab or Center Technical Director, the primary Battle Lab Director or Director of Combat Developments (DCD), HQ TRADOC (DCSCD), appropriate MACOM Principal, and the DAS(R&T).

(*d*) Only after ATDMP approval by the DAS(R&T) may the ATD Manager award new contracts, exercise contract options, or obligate funds associated with the ATD unless the DAS(R&T) grants an exception in writing.

b. ATD Changes after approval by DAS(R&T): Significant changes (for example, changes in exit criteria, cost, schedule) will be coordinated with the ATDMP IPT members, the originating MACOM, TRADOC DCSCD, and the ASTWG Technical Council. The DAS(R&T) will have final approval on changes. The ATD Manager is responsible for document configuration control.

Table 2-2
ATD Nomination and ATD Management Matrix

Plan Contents	ATDN	ATDMP
1. Title	X	X
2. Objective	X	X
a. Purpose and Goal	X	X
b. Technical Concept	X	X
c. Demonstration Concept	X	X
3. Description	X	X
4. Need Significance, and Opportunities	X	X
a. Army Need	X	X
b. Military Significance	X	X
c. Horizontal Technology Integration	X	X
5. Execution Plan	X	X
a. Exit Criteria	X	X
b. Proposed Program by Fiscal Year	X	X
c. Funding Required	X	X
d. Technology Maturity	X	X
e. Leveraging		X
f. Risk Management and Mitigation		X
g. Planned Warfighter Participation	X	X
h. Principal Performers	X	X
i. Logistics Implications		X
j. Integrated Product and Process Development Plan		X
6. Sponsorship/Endorsement	X	X
7. Transition Plan Summary	X	X
a. Joint Technical Architecture - Army	X	X
b. Contracting/Acquisition Strategy		X
c. Army Acquisition Program Manager		X
8. Relationship to other Service or Agency Related Program	X	X
9. Other Considerations	X	X
10. Quad Chart	X	X
11. Simulation Support Plan (SSP) Summary		X
12. Concept Diagram	X	X

Simulation Support Plan
(10 pages maximum)

The intent of the Simulation Support Plan (SSP) is to provide the ATD Manager a tool to use in thinking through modeling and simulation (M&S) requirements throughout the life cycle of the ATD. The SSP serves as the means for providing visibility of the program's M&S to the RDA M&S Domain, the Army, and even to DOD. It is the mechanism that allows the Army to provide effective stewardship and efficient utilization of the M&S resources used in developing new M&S tools. The SSP will enable other ATD Managers and communities within the RDA Domain as well as other Army M&S Domains to leverage existing and emerging M&S capabilities.

1. Purpose: Provide a concise statement of the purpose. Focus on answering the question "What are my needs and uses for M&S tools to enhance my program?"

2. System Description: Provide a very brief summary of the ATD. (Same description as in paragraph 3 of ATDMP).

3. Program Acquisition Strategy: Briefly state the role of M&S in the ATD acquisition strategy emphasizing where M&S will reduce time, resources, and risk as well as improve program implementation. Identify whether the program will use existing tools, modify available tools, develop new tools, or accept the risk of not using M&S for certain functions of your program.

4. Program Simulation Approach/Strategy: Provide a detailed presentation of the M&S strategy for this ATD. The M&S strategy should "overlay" the acquisition strategy and clearly identify the use of M&S within the ATD program. The M&S strategy should be viewed as a "road map" and will be depicted in a Gantt chart format. Conduct and explain the results of the program risk assessment. Discuss the linkages and integration of the M&S across the functional areas and program phases. Discuss maturing of models as the program progresses. Discuss how program needs are mapped to required M&S tools, data bases, and other key elements and how these are communicated to the modeling community providing the M&S support. Discuss how constructive, virtual, and live models will be used and whether an End-to-End Suite of simulations to support engineering development will be used. Describe how this M&S effort conforms to current and emerging standards such as the High Level Architecture (HLA). Additional guidance on HLA requirements is located at http://hla.dmso.mil/.

5. Management: Provide information about the key personnel managing the ATDs M&S to include name, phone numbers, organization, and E-mail addresses.

6. Facilities/Equipment Requirements: Describe the facility requirements for all M&S. This includes both government (PM, Labs, Analysis Agencies, etc.) and contractor(s) and covers both hardware and software requirements. Identify all requirements for equipment, hardware, software, data, communications, special compartmented information facility (SCIF), etc., and determine whether the requirement will be provided by the ATD Manager or by others (be specific). Examples of important requirements include: terrain data requirements and source of terrain data, security requirements, and how selected M&S will receive proper verification, validation and analysis (VV&A) for the intended application prior to use. Identify those items that will not be available to support the system at the required time. Budget for government ownership of equipment (including simulators), when practical, hardware, software, data, etc., critical for cost effective government management of M&S.

7. Funding: Provide fiscal year and cumulative M&S program funding by PE/project in tabular format.

8. Remarks/additional information: This section includes any comments on related information deemed appropriate.

Figure 2-6. Format for Simulation Support Plan

4. Technology Demonstration (TD): These programs, whose designation is at the discretion of the Technical Director, are a means to demonstrate a new technical capability that has potential application to an ATD, ACTD, or systems acquisition program. Funded in either 6.2 or 6.3, these programs differ from ATDs and ACTDs in that they either are not conducted in an operational environment or do not involve experimentation with technology-driven operational issues. A Technology Demonstration can serve as the means to demonstrate that a STO has successfully achieved its objectives, to highlight a new technical capability developed in the S&T community, or to assess the technical maturity of a capability identified outside of the S&T community.

5. ACTDs: ACTDs are a DoD sponsored program to assess the utility of near-term, readily fieldable technology solutions which respond to military needs validated by the Joint Requirements Oversight Council

and to develop the concept of operations that is needed for effective use of these solutions. ACTDs are designed to provide residuals that are left behind with an operational unit for a two-year extended user evaluation (EUE) period after a field demonstration. By the end of the evaluation period a decision is made whether or not to proceed with acquisition based on the results of the assessment and, ultimately, on prioritization by the Army. ACTDs evaluate the military value of advanced technologies through a large-scale experiment with an operational unit while ATDs evaluate technical performance in conjunction with a TRADOC Battle Lab or Center. Additional information is available on the OSD Web Page at www.acq.osd.mil/at/a3.htm.

a. **Army ACTD Management:**

(1) The principal management tool for an ACTD is the ACTD Management Plan (ACTDMP) (see OSD Web Page at www.acq.osd.mil/at/a3.htm.) which is a 25 page maximum document that provides a top-level description of the demonstration with sufficient detail that the vital objectives, approach, critical events, participants, schedule, funding, risk, and transition objectives are understood and (by endorsement) agreed upon by all relevant parties. When the transition strategy indicates that a significant level of transition preparation effort is required, a Transition Integrated Product Team (TIPT) is established soon after approval is given to initiate the ACTD. The purpose of the TIPT is to ensure that the necessary preparations are made during the formulation and execution of an ACTD to allow effective transition into the next phase with a quality product and without a loss of momentum. Endorsement signatures are strongly recommended for major Army participants in the ACTD, and for other participants as appropriate. Approval signatures are required for Commander TRADOC; the ADSCOPS-FD; Army Acquisition Executive (AAE); sponsoring CINC/Component; DUSD(AT); the Joint Staff; and, at the appropriate level, other organizations that are committing resources to the ACTD.

(2) The Implementation Directive (ACTDID) (see OSD Web Page at www.acq.osd.mil/at/a2.htm) is a succinct (two page maximum) agreement which defines the operational capability to be addressed, the general approach to be taken, and roles and responsibilities of the participants, and provides top level guidance for initiating execution of the ACTD. The ACTDID is required prior to release of any OSD funds to the ACTD and is intended to be signed and completed as expeditiously as possible after ACTD approval, typically within 30 days. The ACTDID serves as an interim management document until completion of the ACTDMP. The ACTDID normally requires approval signature by TRADOC HQ, ADCSOPS-FD, DAS(R&T), sponsoring CINC/Component, and the DUSD(AT).

b. ***Army ACTD Nomination Process:***

(1) Generation of ACTD candidates in the Army can occur top-down by direction of senior Army leadership or bottom-up by partnership between a materiel developer, and a Battle Lab working in conjunction with an operational user/sponsor (Figure 2-7). In either case, the proposed funding source for the ACTD candidate needs to be identified as part of the proposal. Because of constrained resources, it is imperative that Army ACTD proposal development, approval process, and execution of the demonstration be conducted as a team effort between the sponsoring CINC/Component, Materiel Developer, and the Combat Developer. Except for nominal funds available from OSD (nominally 10% of total cost), Army ACTDs are funded from existing Army 6.3 S&T funding lines.

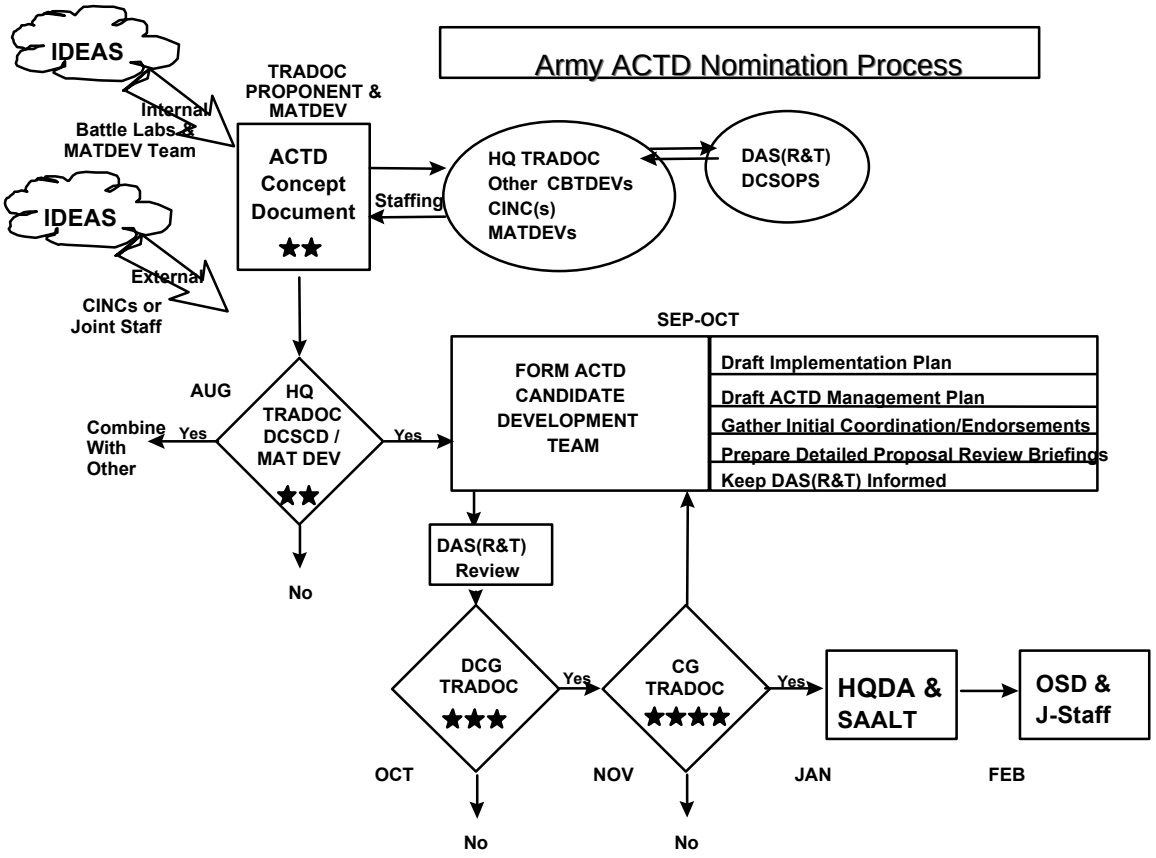


Figure 2-7. Army ACTD Nomination Process

(2) TRADOC Future Operational Capabilities (FOCs) and/or CINC priorities are the basis for the critical operational needs which provide justification for consideration as ACTD nominations. TRADOC proponent and materiel developer teams in conjunction with an operational user/sponsor submit ACTD concept documentation (see Figure 2-8) to HQ TRADOC, DCSCD and the appropriate R&D materiel developer, typically in September. The teams develop draft Implementation Directives and draft Management Plans, conduct initial coordination/endorsements, and prepare for a detailed proposal review. During this time period, DAS(R&T) will be continually appraised of/briefed on status of ACTD candidate development. The DCG TRADOC and DAS(R&T) conduct the detailed proposal review typically in October. CG TRADOC decision briefings are typically held in November. TRADOC submits its approved ACTD candidates with recommendations to HQDA ODCSOPS and SAALT prior to the required submission date to OSD, typically in January.

(3) The ACTD candidates which receive final approval by the Army leadership are submitted by the ADCSOPS-FD and DAS(R&T) to the Deputy Under Secretary Defense (Advanced Technology) (DUSD(AT)) who then obtains Service/Agency and JROC prioritization and recommendations on all ACTD candidates submitted by Services/Agencies to OSD. DUSD(AT) conducts in-depth reviews of those candidates which have received a high prioritization rating. Following these reviews, DUSD(AT) makes the final decision in the ACTD selection process.

Army Advanced Concept Technology Demonstration Nomination

1. Military Need: What is the perceived military need, urgency of timing, and utility of the candidate system?

2. Concept: Describe the basic technology/concept.

3. Demonstration: Describe the type of demonstration envisioned.

4. Jointness in the ACTD: To what degree will the proposed ACTD support joint/combined operations? Is there Joint/Combined participation?

5. ACTD Focus: Identify which JV2010 capability the ACTD is primarily directed towards: Dominant Maneuver, Precision Engagement, Full-Dimensional Protection, Focused Logistics or Information Superiority? Identify which JWCA and/or JWCO is supported by the ACTD.

6. Products and Transition: Briefly describe the product(s) of the ACTD, envisioned residual assets, and ACTD transition opportunities.

7. Key Program Participants: Identify the proposed Demonstration Manager (materiel developer), Operational Manager (TRADOC), CINC/Component User Sponsor, and Lead Service (lead for transition).

8. Schedule and Funding: Identify the overall funding and schedule for the ACTD.

9. Risks: Describe perceived technical, funding, and schedule risks of the proposal.

10. Point(s) of Contact (POC): POC for the ACTD submission. Include Name, Rank, Organization, Phone/Fax Numbers, E-Mail Address, and Mailing Address.

Figure 2-8. Format for Army ACTD Nomination

(4) ACTDs nominated outside of the Army, but which include Army S&T funding, must have the approval of Commander TRADOC, ADCSOPS-FD, and DAS(R&T).

6. Technology leveraging programs: Domestic Technology Transfer and Dual-Use Technology are integral elements of the Army's new acquisition strategy:

a. **Dual-Use S&T Program (DUST):** The mission of this program is to demonstrate new approaches for leveraging commercial research, technology, products, and processes into military systems. These new approaches to working with industry must become common throughout the DoD in order to take full advantage of the technological opportunities offered by the commercial sector. In particular, DUST enables the Services to leverage commercial R&D and investments to improve the cost and performance of military systems and leverage the commercial production base for fielded and future systems. To accomplish this mission, the DUST program cost shares with industry in the development and demonstration of militarily useful, commercially viable technologies (see Figure 2-9). Success of the program depends on intentionally leveraging the commercial sector's resources, research, products, and processes for the benefit of the DoD.

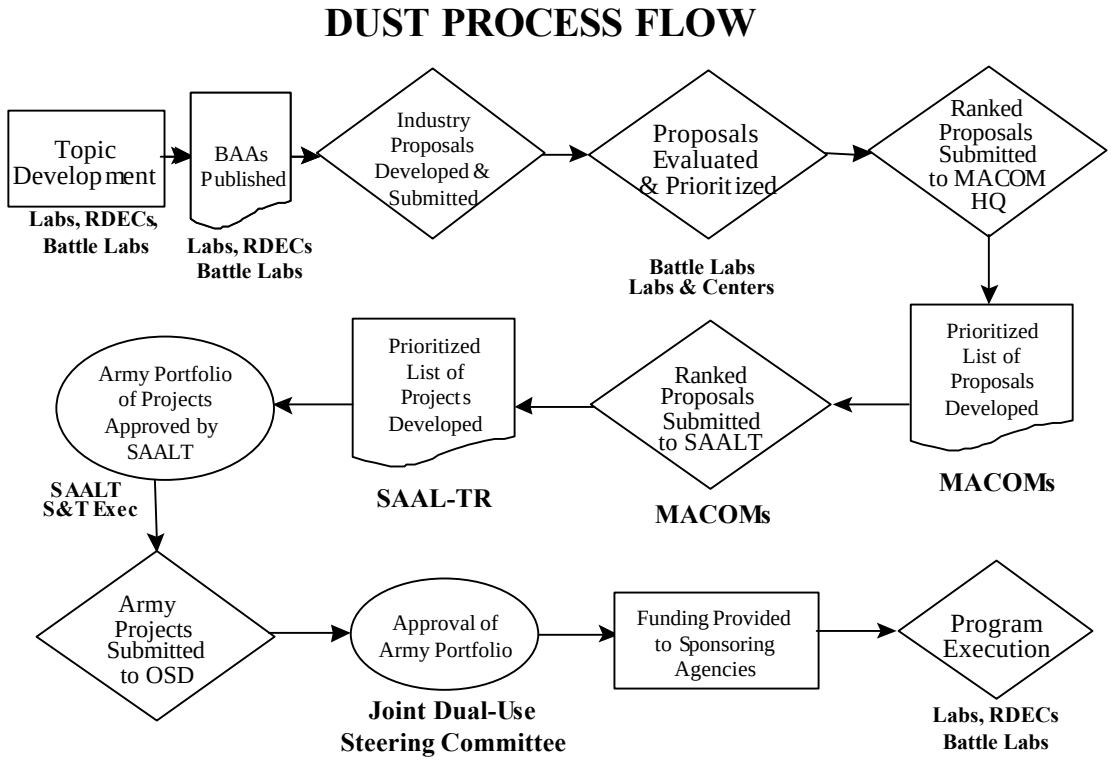


Figure 2-9. DUST Process

b. Advanced Concepts and Technology II (ACT II): The ACT II program (Figure 2-10) enables the Army to demonstrate industry's advanced technologies at the TRADOC Battle Laboratories in a year or less while minimizing industry bid and proposal burden. Unique in DoD, the program solicits brief two-page mature technology concepts from industry in response to Army mission requirements as developed by the TRADOC Battle Labs, Schools, and Centers. Only proposers who have submitted concept papers, which, after careful review, show excellent technical and warfighting merit are invited to submit streamlined, 25-page proposals. From this pool of short proposals, TRADOC selects for funding only those that best satisfy the military needs and have been judged as technically sound by the Army materiel development community. Additional information about the ACT II Program, including how to participate in the annual Broad Agency Announcements, details about past awards, and administrative points of contact can be found at the Army Research Office—Washington Web Site: www.aro.ncren.net/arowash/rt/actii.htm.

c. Small Business Innovation Research (SBIR): The SBIR (Figure 2-11) and Small Business Technology Transfer (STTR) programs are technology programs which allow the Army to access the innovative dual-use technologies of small (less than 500 employees), high-technology firms and to provide incentives to small businesses to partner with researchers at universities, non-profit research institutions, or federally-funded R&D centers (FFRDCs), respectively. In accordance with Public Laws PL97-219, PL99-443, and PL102-564, Small Business Administration Policy, and Office of the Secretary of Defense (OSD) General Counsel guidance, the SBIR and STTR programs allow sole-source Phase III awards to participating SBIR/STTR companies. CICA requirements for follow-on Phase III activities are fully met through the competitive award process in Phase I and Phase II. Sole source Phase III work must represent an application of, or continued research and development for, activities funded in Phase I or Phase II. Under Phase III, the small business is expected to obtain funding from the private sector and/or non-SBIR Government sources to develop the prototype into a viable product or non-R&D service for sale in military and/or private sector markets. Details of the DOD SBIR program including eligibility requirements, proposal preparation instructions,

and sample proposals are provided on the SBIR home page at www.acq.osd.mil/sadbu/sbir. In addition to the SBIR home page, the SBIR help desk 1-800-382-4634; e-mail: sbirhelp@us.teltech.com, now offers expanded information and service. Hard copies of solicitation are available from the help desk upon request.

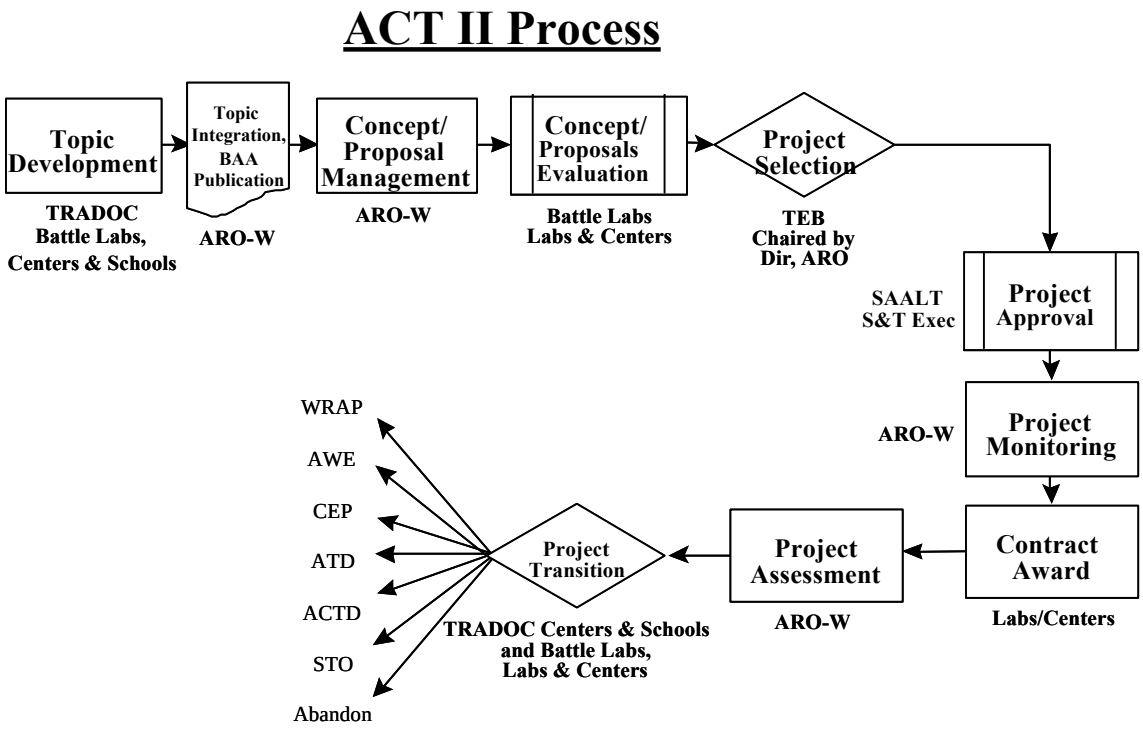


Figure 2-10. ACT II Process

7. Technology transition: The procedures for transitioning of technologies into an acquisition program depend on whether the technology is the result of an ATD or a TD (both described in preceding paragraphs) and whether it is going into a new or an existing acquisition program.

a. TD: The timing and circumstances for transitioning a technology from a demonstration should be negotiated between the S&T developer and the gaining systems manager or PM. A formal transition plan, agreed to by both parties, or a memorandum of understanding is optional but recommended.

b. ATD: The transition plan for an ATD is an important portion of the ATDMP (see Figure 2-5). It formally documents the transition strategy. The transition strategy identifies opportunities to transition ATD products (components, subsystems, and software) into new or existing systems as well as outlines the interest and support of the combat developer and the PM for the technology.

c. **New Acquisition Program:** Transition into a new acquisition program will follow the formal documentation for a Milestone I decision as specified in the referenced documents and DODR 5000.2-R, whether as the result of a TD or an ATD.

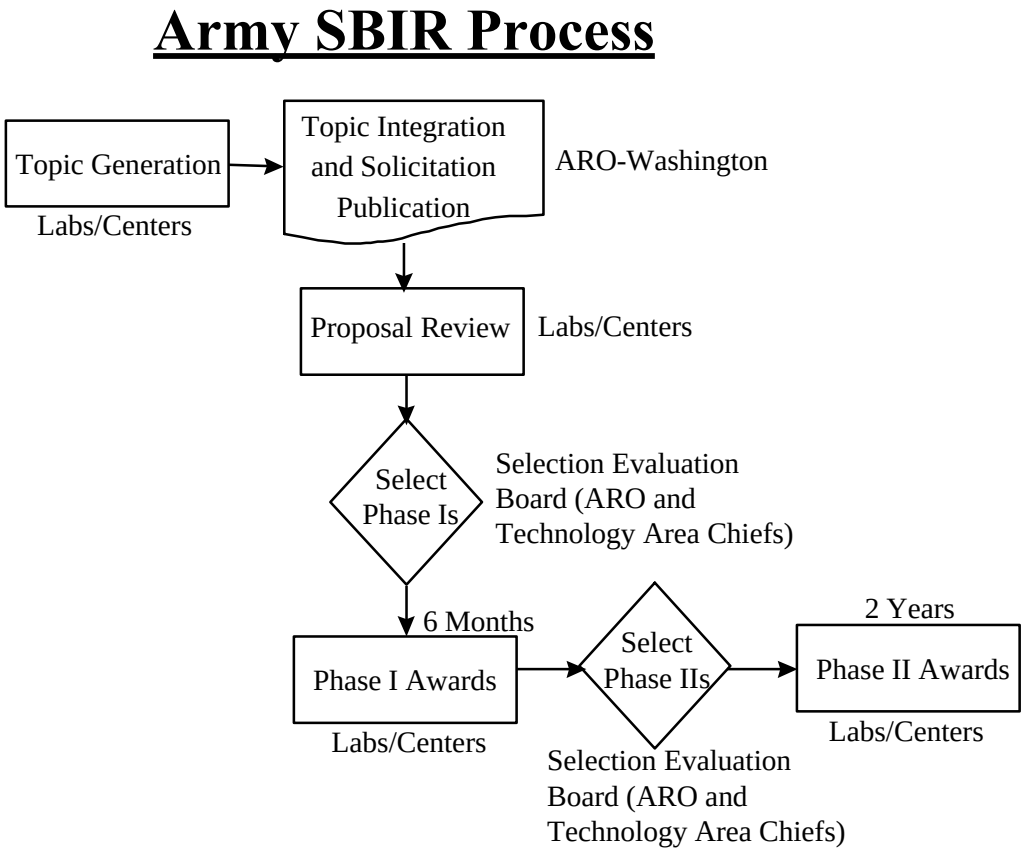


Figure 2-11. Army SBIR Process

d. **Fast Track Program:** Fast Track is an Army initiative which formalizes a method to promote a streamlined, effective, timely transition of high priority technology into the acquisition process. This program implements a two step acquisition. It provides up-front designation to a select few ATDs that have a good chance of successful transition directly to the Engineering and Manufacturing Development (EMD) Phase. The Fast Track designation is essential for obtaining increased management attention from stakeholders. It also helps justify the expenditure of additional S&T funds in preparing for program transition to the EMD Phase. Details on Fast Track are in Appendix XXII.

Part 3
Program Structure

3.1 Purpose

Point of Contact: Director, Acquisition Policy (SAAL-RP), Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 2511 Jefferson Davis Highway (Suite 10036), Arlington, VA 22202-3911

3.2 Program Goals

Point of Contact: Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), ATTN: SAAL-ZD, 103 Army Pentagon, Washington, DC 20310-0103

3.2.1 Objectives and Thresholds

Point of Contact: HQDA, Deputy Chief of Staff for Operations and Plans, ATTN: DAMO-ZDS, 400 Army Pentagon, Washington, DC 20310-0400

The Combat Developer (CBTDEV) Integrated Concept Team (ICT) uses results of the Analysis of Alternatives (AoA) and cost-performance tradeoff analyses as inputs to requirements and operational tradeoff analyses that refine system performance threshold and objective Key Performance Parameters (KPPs). The CBTDEV is responsible for conducting the requirements trade-off analyses to determine the operational mission performance requirements, and to identify where trade-offs might be made to reduce cost or enhance performance. The analysis may evaluate trade-offs in battlefield performance; logistics readiness; critical system characteristics; and manpower, personnel, and training constraints. Typically performed during Phase I, these tradeoff analyses identify required capabilities for the Operational Requirements Document (ORD) including system performance thresholds and objectives that are consistent with initial broad statements of operational capability. The CBTDEV / ICT should document the results of these requirements trade-off analyses to provide an audit trail for the analysis supporting the ORD. Note that after the concept has been developed and approved during Phase 0, working level IPTs typically replace the ICT for Phase I and beyond.

The CBTDEV works with the Materiel Developer (MATDEV) and independent analysis team to identify study issues, alternatives, and other factors pertinent to requirements determination. When software is an area of significant risk, Life Cycle Software Engineering Center (LCSEC) staff should be assigned to participate in the analysis IPT and support the MATDEV in identifying critical software requirements and the feasibility of obtaining desired mission performance through software and computer-based solutions. Depending on the issues of concern, the analysis may evaluate trade-offs in battlefield performance; computer-based systems performance, logistics readiness; critical system characteristics; and manpower, personnel, and training constraints. While the hardware system represents a materiel response to an operational need, the requirements analysis defines satisfaction of the need through determination of an acceptable set of system characteristics and performance measures.

The CBTDEV and MATDEV use their own analysis teams, Training and Doctrine Command (TRADOC) Analysis Center (TRAC), the Army Materiel Systems Analysis Activity (AMSAA), and/or contract support to provide analytic underpinning for identification of KPPs, the Test and Evaluation Master Plan (TEMP), and other elements of the ORD. The analysis team may use mathematical analysis, Advanced Warfighting Experiments (AWEs), simulations, or other operations research (OR) tools in conducting the trade-off analysis. There is no set format or scope for a requirements tradeoff analysis. The study team should tailor the analysis to address the issues peculiar to the system under review.

For Acquisition Category (ACAT) II, III, and IV programs, the threshold value for schedule is the objective value plus six months. The threshold value for cost is the objective value plus 10 percent. Any tradeoffs outside the range between the objective and threshold values may not be made without approval of the TRADOC Commander and the Milestone Decision Authority (MDA).

3.2.2 Acquisition Program Baselines (APBs)

Point of Contact: Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), ATTN: SAAL-ZD, 103 Army Pentagon, Washington, DC 20310-0103

For ACAT II, III, and IV programs, the format mirrors the format in the Consolidated Acquisition Reporting System (CARS) or its replacement. The Defense Acquisition Deskbook (DAD) contains sample formats and examples.

Two management tools available to Program Managers (PMs) for tracking program progress are:

1. The Integrated Master Plan (IMP) is an event-driven plan that documents the significant accomplishments necessary to complete the tasks defined in the Statement of Objectives (SOO) or Statement of Work (SOW) and ties the accomplishment to a key program event. Additionally, exit criteria are provided for each significant event to facilitate the assessment of successful completion. The program milestones depicted in the IMP are event oriented and represent integrated product development that encompasses all disciplines (for example, engineering, test, manufacturing, management, etc.). The IMP is oriented by product using the Work Breakdown Structure (WBS) numbering system and contains no calendar information. The IMP is normally contractually incorporated.

2. The Integrated Master Schedule (IMS) is a detailed, time-dependent, networked, task oriented schedule of the effort required to accomplish the complete program and its relationship to the events, accomplishments, and exit criteria identified in the IMP. An integrated program network schedule includes events defined in the IMP, which are detailed to include all of the tasks and activities required to complete each milestone. The IMS is directly traceable to the IMP and the WBS. The Government solicitation should contain an initial draft program IMS that should be limited to major milestones, activities, and events. The offerors proposal should build upon the initial IMS and include a lower level of detail reflecting the specific tasks and activities based on the proposed approach and resources required to develop and/or produce the system. The IMS is not normally part of the contract, but is updated periodically by data submittal.

3.2.2.1 Preparation and Approval

Same Point of Contact as paragraph 3.2.2.

For ACAT II, III, and IV programs, the PM prepares a new APB prior to a major milestone decision and following a program restructure. The program is re-baselined after a program breach.

3.2.2.2 APB Content

Same Point of Contact as paragraph 3.2.2.

For ACAT II, III, and IV programs, the performance parameters should be the key performance parameters approved by the TRADOC Commander and any other parameters required by the MDA.

3.2.3 Exit Criteria

Point of Contact: Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), ATTN: SAAL-ZD, 103 Army Pentagon, Washington, DC 20310-0103

3.3 Acquisition Strategy (AS)

Point of Contact: Director, Acquisition Policy (SAAL-RP), Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 2511 Jefferson Davis Highway (Suite 10036), Arlington, VA 22202-3911

3.3.1 Open Systems

Points of contact:

HQDA, Deputy Chief of Staff for Operations and Plans, ATTN: DAMO-FDJ, 400 Army Pentagon, Washington, DC 20310-0400
Director of Information Systems Command, Control, Communications and Computers (DISC4), ATTN: SAIS-IAA-S, 107 Army Pentagon, Washington, DC 20310-0107

3.3.2 Sources

Point of Contact: U.S. Army Materiel Command, ATTN: AMCRDA-AP, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001

3.3.2.1 Commercial and Non-Developmental Items

Points of contact:
Director, Acquisition Policy (SAAL-RP), Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 2511 Jefferson Davis Highway (Suite 10036), Arlington, VA 22202-3911
U.S. Army Materiel Command, ATTN: AMCRDA-AP, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001
For Foreign Comparative Testing: Director, International Cooperative Programs Activity, ATTN: AMXIP-OI, Aberdeen Proving Ground, MD 21005-5055

References:
DOD Manual 5000.3-M-2, “Foreign Comparative Testing (FTC) Program Procedures Manual.”

DOD Handbook SD-2, “Buying Commercial and Non-developmental Items: A Handbook,” April 1996, available on the Internet at:
http://www.dsp.dla.mil/documents/sds.htm.
Draft DOD Handbook SD-5, “Market Analysis,” July 1997, available on the Internet at:
http://www.dsp.dla.mil/documents/sds.htm.
AR 73-1, “Test and Evaluation Policy.”
AR 602-2, “Manpower and Personnel Integration (MANPRINT) in the System Acquisition Process.”
AR 37-100-FY, “The Army Management Structure.”
AR 385-16, “System Safety Engineering and Management.”
DA Pamphlet 73-1, “Test and Evaluation in Support of Systems Acquisition.”
AR 700-90, “Army Industrial Base Program.”

Consideration of the use of Commercial and Non-Developmental Items (CaNDI), as defined in the Federal Acquisition Regulation (FAR) Part 2, has become an integral part of acquisition reform. The Federal Government has expressed its preference for the acquisition of commercial items by law (section 2377, title 10, United States Code) and in Title VIII of the Federal Acquisition Streamlining Act of 1994 (Public Law 103-355). The FAR Part 12 implements this preference by establishing acquisition policies more closely resembling those of the commercial marketplace and encouraging the acquisition of commercial items and components.

DoD Handbook SD-2 gives excellent guidance on CaNDI acquisitions. This handbook provides “lessons learned” and “things to consider” when buying commercial items and Non-Developmental Items (NDI), whether as systems, components, or items. Topics covered include market research, acquisition strategy, requirement definition, logistic support, test and evaluation, and product assurance. New in this version are two case studies illustrating successful techniques for commercial item acquisition, as well as a number of “mini-case” examples throughout the handbook. Paper copies are available from the DoD Single Stock Point, Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094, (215) 697-2667/2179. Electronic copies are available for download at the following Internet address: http://www.acq.osd.mil/dsp/documents/sd-2.html and are also contained in the Defense Acquisition Deskbook.

3.3.2.2 Dual Use Technologies and Use of Commercial Plants

Point of Contact: HQDA, ATTN: SAAL-ZP, Skyline 6, Suite 309, 5109 Leesburg Pike, Falls Church, VA 22041-3201

3.3.2.3 Industrial Capability

Points of contact:
US Army Materiel Command, ATTN: AMCRD-AI, 5001 Eisenhower Ave, Alexandria, VA 22333-0001
HQDA, ATTN: SAAL-PP, Skyline 6, Suite 916, 5109 Leesburg Pike, Falls Church, VA 22041-3201
Reference: AR 700-90, “Army Industrial Base Program.”

The Army Industrial Base program is defined in AR 700-90. AR 700-90 is currently under review and likely to be revised.

3.3.2.4 Critical Product and Technology Competition

Point of Contact: HQDA, ATTN: SAAL-ZP, Skyline 6, Suite 309, 5109 Leesburg Pike, Falls Church, VA 22041-3201

3.3.2.5 Leasing

Point of Contact: HQDA, ATTN: SAAL-ZP, Skyline 6, Suite 309, 5109 Leesburg Pike, Falls Church, VA 22041-3201

3.3.2.6 Market Research (This paragraph is not present in DoD 5000.2-R.)

Points of contact:
Director, Acquisition Policy (SAAL-RP), Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 2511 Jefferson Davis Highway (Suite 10036), Arlington, VA 22202-3911
U.S. Army Materiel Command, ATTN: AMCRDA-AP, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001

References:
DOD Handbook SD-2, “Buying Commercial and Nondevelopmental Items: A Handbook,” April 1996, available on the Internet at:
http://www.dsp.dla.mil/documents/sds.htm.
DOD Handbook SD-5, “Market Research,” July 1997,available on the Internet at: http://www.dsp.dla.mil/documents/sds.htm.

Once a materiel solution is determined as the best means of overcoming a battlefield deficiency, the decision as to whether the materiel solution will take the form of a modification to an existing system, a CaNDI acquisition, or a new development program begins with market research. The materiel developer and/or combat developer initiates the market research to determine whether an existing product meets the need before undertaking expensive research and development (R&D) to develop a new system. Market research is now required by law (10 U.S.C. 2305 and 2377) and FAR Part 10 and 11.002.

Market research is an umbrella term comprised of two principal activities: market surveillance and market investigation. Market surveillance is general and ongoing, while market investigation has a narrower focus in response to a defined need. These activities provide the data necessary to determine the most efficient and effective means of satisfying the materiel need. Activities include reviewing information on technologies, existing hardware, inherent industrial capabilities, and foreign dependency.

SD-5 is an excellent guide for conducting market research. It includes definitions, explanations, examples and lists of resources to facilitate the research required to do this job well. Paper copies are available from the DoD Single Stock Point, Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094, (215) 697-2667/2179. Electronic copies are available for download at the following Internet address: http://www.dsp.dla.mil/documents/sds.htm and is available from the Defense Acquisition Deskbook.

An automated Market Research tool is available to assist acquisition personnel developing new requirements. It can be found on the Internet at: http://www.imart.org.

3.3.3 Cost, Schedule, and Performance Risk Management

Point of Contact: Program Executive Officer, Intelligence, Electronic Warfare and Sensors, ATTN: SFAE-IEW&S, Fort Monmouth, NJ 07703-5000

The traditional “Cost/Schedule Management” has been reengineered as “Earned Value Management” (EVM), integrating cost, schedule, and performance (or technical) aspects of acquisition programs. Because these three aspects of all acquisition programs are interrelated variables, planned or unplanned changes to any one variable usually affects one or both of the other variables. Government acquisition personnel (particularly program managers) and contractors have vested interests in understanding the cost, schedule, and performance aspects of their programs. By understanding the relationships among these variables, program management personnel and contractors can manage the variables, thereby reducing the potential for, and severity of, unplanned changes, commonly referred to as program risk. Program managers and contractors should use effective management control systems, based on valid, timely, and auditable data, to properly relate cost, schedule, and performance. Effective management control systems are essential for managing program risk. While designing and structuring an acquisition program, including its management control system, the following issues should be considered:

1. What cost/schedule/performance tradeoffs are being contemplated or have been made?

2. Does the acquisition strategy appropriately allocate risk between the Government and the contractor and does it provide incentives to the contractor to control cost and schedule while meeting performance requirements?

Every Program Manager should ensure that his program's Life Cycle Cost Estimate (LCCE) (or Program Office Estimate (POE)), includes current estimates of cost, schedule, and performance risk.

3.3.4 Cost as an Independent Variable (CAIV)

Note: CAIV policies and procedures are addressed in Parts 1, 2, and 3 of DOD 5000.2-R. Paragraphs 3.3.4 and 3.3.4.1 below provide consolidated Army CAIV guidance to be used with appropriate paragraphs of Parts 1, 2, and 3 of DOD 5000.2-R.

Point of Contact: Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 103 Army Pentagon, ATTN: SAAL-ZD, Washington, DC 20310-0103

References:
AR 71-9, “Materiel Requirements.”

CAIV applies to all defense acquisition programs. The Milestone Decision Authority (MDA) can tailor CAIV to ACAT III and ACAT IV programs as appropriate.

The CAIV process is most successful when there is early and continuous involvement by the CBTDEV, MATDEV, and, as appropriate, industry. The CBTDEV represents the user throughout the acquisition process regarding performance, schedule, and user affordability constraints. CAIV is focused on achieving a "best value" materiel solution—meeting operational requirements with a solution that is affordable. CAIV-based performance parameters are essential to the acquisition and fielding of affordable and capable systems. CAIV-based parameters are those that meet critical user requirements and do not exceed cost constraints; in other words, what the Army is willing to pay.

The CAIV process treats cost as an input to, rather than an output of, the materiel requirements and acquisition processes. CAIV can be implemented within existing Army structures and organizations and is compatible with the Federal Acquisition Regulation, DoD Acquisition Policy (DoD 5000, and Army policy (AR 70-1 and AR 71-9)). See the Defense Acquisition Deskbook for additional information on CAIV. The procedures for implementing CAIV in Army programs are described in the paragraphs that follow.

The objectives of CAIV are to:

1. Optimize the total force for a given level of investment by achieving the best balance among life cycle cost, performance, schedule and risk.

2. Promote the integration of the CBTDEV and MATDEV efforts to conduct timely and complete CAIV-based cost-performance tradeoffs to arrive at an affordable balance among life cycle cost, performance, risk and schedule.

3. Promote industry participation, consistent with statutory requirements, in ICT and IPT efforts throughout the total system life cycle.

4. Ensure requirements and goals stated in programmatic documentation (Operational Requirement Document (ORD), Acquisition Program Baseline (APB), Acquisition Strategy (AS), Test and Evaluation Master Plan (TEMP), and Request For Proposal (RFP)) are synchronized, consistent, and refined at each milestone decision through CAIV-based processes.

5. Establish CAIV-based cost objectives (development, procurement, and sustainment costs) early in the acquisition process (prior to Milestone I) to have the greatest impact on total life cycle cost.

6. Aggressively manage the requirement and acquisition processes to produce warfighting systems that meet operational requirements and are affordable (low total life cycle costs).

7. Ensure contractor and government personnel are incentivized to meet cost-performance-schedule (CPS) objectives and discouraged to pursue costly performance enhancements that are of limited operational value.

The MATDEV must aggressively manage the acquisition program to reduce total life cycle costs throughout each phase of the acquisition program. CAIV objectives are contained in the AS and APB and are reported at each milestone (MS) review. The AS contains a summary of CAIV initiatives planned for subsequent program phases. CAIV-based cost, schedule and performance requirements must be included in RFPs. The RFP must also solicit from potential suppliers an approach for CAIV that addresses management, metrics, and incentives for meeting CAIV objectives. Implementing CAIV requires conducting cost-performance tradeoffs, identifying life cycle cost drivers, establishing cost and performance goals, organizing and incentivizing a hierarchy Integrated Product Team (IPT) structure, and tracking progress using earned value management and hardware/software metrics.

3.3.4.1 Cost/Performance Tradeoffs

Points of contact:
Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 103 Army Pentagon, ATTN: SAAL-ZD, Washington, DC 20310-0103
HQDA, Deputy Chief of Staff for Operations and Plans, ATTN: DAMO-ZDS, 400 Army Pentagon, Washington, DC 20310-0400

The CAIV process compels the requirement and acquisition communities to collectively plan and execute CPS tradeoffs. Teamwork is key to conducting effective tradeoffs. CPS tradeoffs provide the foundation for realistic and affordable cost, performance, and schedule targets.

Prior to MS 0, the ICT determines if a materiel need exists and, when applicable, develops the Mission Needs Statement (MNS). An ICT then produces the initial ORD for a materiel solution prior to MS I; finalizes the ORD prior to MS II; and, when necessary, revises or updates the ORD after MS II. When the materiel

need is for a systems of systems, an ICT may produce a Capstone Requirement Document prior to MS I. The MATDEV and others are important members of the ICT.

Upon approval of a materiel need (in other words, MNS for ACAT I and IA programs and ICT report for other programs), the MATDEV forms a Cost Performance IPT (CPIPT) to develop the CAIV strategy and to complete CPS tradeoffs leading to programmatic cost, performance and schedule parameters. The CBTDEV and appropriate other ICT members are CPIPT members. The CPIPT and ICT must work closely together to finalize threshold and objective values for cost, performance, and schedule parameters for documentation required for MS approval.

The ICT and the CPIPT work closely together from different perspectives:

1. The ICT focuses on defining a set of operational capability parameters in the ORD that are the minimum acceptable to the user (in other words, threshold values). Each ORD parameter has a threshold value (in other words, minimum acceptable to the user) and objective value (in other words, desired by the user and the MATDEV is attempting to attain). If no objective value is stated for a parameter, then the threshold and objective are the same for that parameter. A separate objective value is stated if it represents a measurable, beneficial increment in operational capability above the threshold value. Threshold and objectives in the ORD shall be CAIV-based considering CPS tradeoffs, results of analysis of alternatives (AoA), concept studies, and the impact of affordability constraints. A select small set of operational capabilities is designated as Key Performance Parameters (KPP). KPPs are extracted from the ORD and included in the APB.

2. The CPIPT focuses on defining a complete set of cost, performance, and schedule parameters for the AS, RFP, and APB that track to the ORD and characterize the ensuing acquisition program (for example, objective values). Each APB parameter must be CAIV-based and have an objective and threshold value. If a threshold value does not already exist, then the threshold for performance will equal the objective; the threshold for schedule will equal the objective plus 6 months for ACAT I and 3 months for ACAT IA; and the threshold for cost will equal the objective plus 10 percent.

3. The CPIPT (MATDEV, CBTDEV, plus others) may tradeoff cost, performance, and schedule within the trade space established by the approved ORD and APB threshold and objective values. The CPIPT is empowered to recommend CPS changes as long as threshold values in the ORD and APB can be met. If changes require ORD or APB threshold changes, the MATDEV shall ensure that the changes are quickly brought before the ORD and APB approval authorities for decision.

The CPIPT executes tradeoff analyses necessary to establish meaningful thresholds and objectives for aggressive and achievable cost, schedule and performance targets. The CPIPT explores in detail the relationships between:

1. The cost and performance of anticipated system characteristics;

2. The cost and risk of meeting alternative schedule constraints; and

3. The cost and design of life cycle support alternatives, including maintenance and support by LCSEC and/or field engineering staff (organic support), by the developer, and by a 3rd party, or a combination of these.

In performing these analyses, the CPIPT is to review the military value of performance requirements so as to ensure that cost, performance, and schedule parameters are established that best balance performance with the cost of achieving that performance.

The cost analysis community will actively participate in the CPIPT in order to ensure the results of CAIV analyses are understood and supported by those responsible for developing the Program Office Estimate (POE), Independent Cost Estimate (ICE), and the Army Cost Position (ACP). The CPIPT must interface closely with the Cost Analysis IPT (CAIPT) that prepares the acquisition program's Life Cycle Cost Estimates. As system and subsystem cost estimates (including risk estimates) are refined throughout each phase of the acquisition program, the CAIPT should serve as the official “clearing house” of cost data. The CPIPT should use the cost data validated by the CAIPT and the performance data validated by other functional subject area experts to conduct CAIV analyses and cost performance tradeoff analyses.

As the program matures, the CPIPT develops an increasingly better understanding of cost, performance, and schedule relationships. The CPIPT, together with the ICT, works to ensure key cost, schedule, and performance parameters included in program documentation are synchronized and consistent.

1. During Phase 0, Concept Exploration, the ICT develops the ORD through CAIV-based CPS tradeoffs (requirement tradeoff analyses, concept studies, Analysis of Alternatives (AoA), affordability constraints, and other studies). The ICT and CPIPT operate concurrently and exchange analysis planning, results, and recommendations throughout the requirements documentation process. The ICT will input its ORD operational

capability parameters to the CPIPT for development of objective values. The ICT will consider the results of the CPIPT CAIV-based tradeoff analyses prior to approval processing of the initial ORD:

a. Operational capability and other performance parameters, including proposed threshold and objective values, developed as system program goals, and proposed for inclusion in the ORD.

b. Schedule parameters recommended for First Unit Equipped (FUE), Initial Operational Capability (IOC), and Full Operational Capability (FOC) as appropriate, which consider the cost implications of meeting the users preferred schedule.

2. The MATDEV prepares an AS and APB for approval by the MDA at MS I. The APB contains CAIV-based objectives and thresholds for key cost, schedule, and performance parameters. APB performance parameters include KPPs from the ORD and other performance parameters deemed essential by the MDA.

3. APB cost parameters reflect total program life cycle costs—RDT&E, procurement, MILCON, acquisition O&M, and O&S. Prior to the milestone review, the CPIPT and CAIPT will compare CAIV-based life cycle cost values with the ACP that is the most likely total cost estimate for the program. CAIV derived life cycle cost objectives are identical to the APB life cycle cost objectives. For ACAT I and ACAT II programs, the Army Cost Review Board will recommend to the Assistant Secretary of the Army for Financial Management and Comptroller (ASA(FM&C)) the ACP for the system's life cycle cost and provide the MDA an assessment of risk. The ACP supports the program budget that shall not exceed the APB cost thresholds.

4. During Phase I, Program Definition and Risk Reduction, the CPIPT continues to conduct CAIV-based tradeoff studies to further refine system performance objectives and cost estimates. As the system and its requirements become better understood, the CPIPT increases its focus on those issues such as manufacturing, supportability, and producibility, where the alternatives and cost implications could not be adequately considered until the system concept had matured. Output from the CPIPT studies forms the basis for recommended refinement of the ORD, AS, APB and TEMP prior to MS II.

5. CAIV-based tradeoffs continue under the CPIPT throughout Phase II, Engineering and Manufacturing Development (EMD). The CAIV objective during Phase II is to refine the balance among life cycle cost, performance, schedule, and risk. Output from the CPIPT studies forms the basis for recommended refinement of program documentation prior to MS III. Changes to the ORD should be rare during this acquisition phase.

6. Post MS III CAIV activities focus on continued cost reduction. Value Engineering, Engineering Change Proposals, Modernization Through Spares, Prime Vender Support and other initiatives need to be exercised in order to manage and continuously reduce life cycle costs.

CAIV-based tradeoff analyses are the foundation for refining requirements and establishing programmatic cost, performance, and schedule goals at successive milestone decisions. A projected inability to meet an APB threshold will initiate a review by the MDA and the CBTDEV to reconsider program requirements and goals, and to explore options essential for reestablishing program viability. The review will identify the need for additional CPS tradeoffs and the capability of the system in light of the deficiency for meeting the KPPs in the ORD.

3.3.4.2 Cost Management Incentives

Point of Contact: Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 103 Army Pentagon, ATTN: SAAL-ZD, Washington, DC 20310-0103

3.3.5 Contract Approach

Point of Contact: HQDA, ATTN: SAAL-PP, Skyline 6, Suite 916, 5109 Leesburg Pike, Falls Church, VA 22041-3201

3.3.5.1 Competition

Same Point of Contact as paragraph 3.3.4.

3.3.5.2 Best Practices

Same Point of Contact as paragraph 3.3.4.

Reference:
AMC Pam 70-25, “Functional Support Templates.” Available from the Defense Acquisition Deskbook under Army Discretionary Documents.
AMC Pam 715-3, “Contracting for Best Value.” Available from the Defense Acquisition Deskbook under Army Discretionary Documents.

3.3.5.3 Cost Performance

Point of Contact: Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 103 Army Pentagon, ATTN: SAAL-ZD, Washington, DC 20310-0103

3.3.5.3.1 Integrated Baseline Reviews

Same Point of Contact as paragraph 3.3.4.3.

3.3.5.4 Advance Procurement*

Point of Contact: Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 103 Army Pentagon, ATTN: SAAL-RI, Washington, DC 20310-0103

Reference: DoD 7000.14-R, Volume 2B, "DoD Financial Management Regulation (Budget Presentation and Formulation)."

* Information contained in corresponding paragraph of DoD 5000.2-R is not applicable to ACAT IA programs.

Advance procurement requests for long lead-time items are limited to the end items in major procurement appropriations. Advance Procurement is warranted when items have significantly longer lead times than other components, parts, and materiel of the same end item (or when the effort must be funded in an advance procurement time frame) in order to maintain a planned production schedule. For new development programs, the planned production schedule should be based on a fully funded program. The cost of components, material, and parts budgeted for advance procurement should be relatively low when compared to the remaining portion of the cost of the end item. The full cost of components, materiel, parts, and effort included in the advance procurement request should be budgeted in the Future Year Defense Program (FYDP) consistent with full funding procedures. The budget requests should properly debit or credit advance procurement budget requests as defined in Exhibits P-1, P-5, P-10 and P-40 instructions contained in DoD 7000.14-R.

3.3.5.5 Continuous Acquisition and Life-Cycle Support (CALS) Acquisition Program Integrated Digital Environment (IDE)

Points of contact:

U.S. Army Logistics Integration Agency, ATTN: LOIA-LT, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001

U.S. Army Materiel Command, ATTN: AMCCA-I, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001

U.S. Armament Research, Development and Engineering Center, ATTN: AMSTA-AR-EDE-A, Picatinny Arsenal, Dover, NJ 07806-5000

U.S. Army Armament and Chemical Acquisition and Logistics Activity, ATTN: AMSTA-AC-AP, Rock Island, IL 61200-6000

U.S. Army Chemical and Biological Defense Command, ATTN: SCBRD-ENE-M, Aberdeen Proving Ground, MD 21010-5423

U.S. Army Communications-Electronics Command, ATTN: AMSEL-LC, Fort Monmouth, NJ 07703-5001

U.S. Army Industrial Operations Command, ATTN: AMSIO-IOI, Rock Island, IL 61200-6000

U.S. Army Aviation and Missile Command, ATTN: AMSMI-AIS, Redstone Arsenal, AL 35898-5000

U.S. Army Simulation, Training, and Instrumentation Command, ATTN: AMSTI-EV, 12350 Research Parkway, Orlando, FL 32826-3276

U.S. Army Tank-Automotive and Armaments Command, ATTN: AMSTA-IM-OPLE, Warren, MI 48397-5000

References:

MIL-STD-974, "Contractor Integrated Technical Information Service (CITIS)." U.S. Army CALS Implementation Plan.

Army Program Manager Pocket Guide for Implementing CALS in the Acquisition Process, October 1996.

The OSD CALS Office Joint Service CALS Reference Toolkit; available on the Internet at: http://www.acq.osd.mil/log/lro/toolkit/default.html.

Continuous Acquisition and Life-Cycle Support (CALS) is a global strategy for Government and industry that furthers enterprise integration through the streamlining of business processes and the application of standards and technology for the creation, management, exchange, and use of digital technical information. CALS is an enabling tool. CALS is an integrator of digital technical information for weapon system acquisition, design, manufacturing, and support functions. Accomplished through the creation and use of a shared data environment, it eliminates the development of duplicate data used for separate processes. A long standing CALS motto is create data once, use many times. Ultimately, the CALS approach leads to improvements in design and manufacturing capability, as well as logistics support.

Include CALS early in a program's acquisition strategy. Its portion of the RFP addresses how the weapon system's digital technical information will be acquired, used and supported, in harmony with the infrastructure to handle it. The “Army Program Management Pocket Guide for Implementing CALS in the Acquisition Process” is an excellent guide for how to implement CALS in the acquisition strategy.

3.3.6 Management Approach

Point of Contact: Director, Acquisition Policy (SAAL-RP), Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 2511 Jefferson Davis Highway (Suite 10036), Arlington, VA 22202-3911

3.3.6.1 Streamlining

Point of Contact: HQDA, ATTN: SAAL-ZP, Skyline 6, Suite 309, 5109 Leesburg Pike, Falls Church, VA 22041-3201

References:
AMC Pam 70-25, “Functional Support Templates,” available on the internet under Army Discretionary Documents on the Defense Acquisition Deskbook.
The Navy “TurboStreamliner” available at:
http://www.acq-ref.navy.mil//turbo.

3.3.6.2 International Considerations*

Point of Contact: Chief, Cooperative Research, Development, and Acquisition, Division, Office of the Deputy Under Secretary for International Affairs (SAUS-IA-DSC), Washington, DC

* Information contained in corresponding paragraph of DoD 5000.2-R is normally not applicable to ACAT IA programs.

A key objective of international armaments cooperation is to reduce weapons system costs through joint development, procurement and support, while enhancing the interoperability between allied nations' systems. Consider the potential for international cooperation in every phase of the acquisition process.

Formulation of cooperative development programs involves resolution of issues in the areas of requirements, harmonization, cost share, work share, technology transfer, and others. While multinational force compatibility may increase system acquisition cost, it can provide a more cost-effective defense for the whole force through interoperability and can reduce life cycle costs.

There are numerous sources dedicated to discussing mutual armaments needs and cooperative opportunities. These sources include the CNAD (Conference of National Armaments Directors); the NAAG (North Atlantic Treaty Organization (NATO) Army Armaments Group), which is the CNADs Main Armaments Group for land armaments; and numerous bilateral fora, such as the U.S.-Japan Systems and Technology Forum. Additionally, there are information and databases such as the Defense Data Exchange Program (DDEP) and the NATO Conventional Armaments Planning System (CAPS).

The decision to include international partners needs to be addressed as early as possible, as it is difficult to adopt significant changes after the Concept Exploration and Program Definition and Risk Reduction phases of the system development life cycle.

ACAT I programs must include a discussion of the potential for International armaments cooperation in their acquisition strategy, IAW DoD 5000.2-R, Part 3. While DoD 5000.2-R does not specifically require this type of analysis for ACAT II and III programs, the program managers should fully investigate potential cooperative opportunities as part of the acquisition strategy for such programs.

A viable alternative to development is the acquisition of CaNDI. The Foreign Comparative Testing (FCT) program offers a structured and funded means for program offices to evaluate the suitability of a foreign developed item for purchase.

Any international cooperative program requires a formal agreement (an International Agreement, or IA) between/among the nations involved. IAs are also known as Memoranda of Understanding (MOUs) or Memoranda of Agreement (MOAs). The IA formally commits all parties to provide resources to perform defined actions. All armaments cooperation IAs must be developed using DoD IA generator software, and any deviations from that format must be justified and approved. The first step toward developing an IA is to complete a Summary Statement of Intent (SSOI). The SSOI is utilized to request authority to develop and negotiate the IA.

DoDD 5530.3 is the principal directive that governs the international agreement process. However, the Army has streamlined some aspects of the process to make it more efficient and less cumbersome.

3.3.6.3 Joint Program Management

Point of Contact: Office of the Assistant Secretary of the Army (Acquisition, Logistics, and Technology), 2511 Jefferson Davis Highway, ATTN: SAAL-ZAC (Suite 10100), Arlington, VA 22202-3911

1. Army As Lead Component. When designated as the lead Component for a joint program, the Army will provide a board-selected PM and establish a PM Office (PMO) in accordance with Appendix VIII—Establishing PM Offices, of this Pamphlet. The appropriate level of management will be:

a. Determined by the Department of Defense (DoD) MDA document assigning the Army as lead Component, or

b. Determined by the Army Acquisition Executive (AAE).

The AAE may designate the PM as a direct reporting PM or designate a Program Executive Officer (PEO) to extend management oversight to the program. Except as delineated in DoD 5000.2-R, the PEO or direct reporting PM will have the full line authority for the management of the assigned program(s) as an extension of the AAEs management oversight.

Army authorizations designated to support the joint PMO will be carried on the Army Acquisition Executive Support Agency (AAESA) Table of Distribution and Allowances (TDA).

2. Lead Component Other Than Army. When another Service Component has been designated as the lead, the Army's participation and relationships is specified in and governed by a Headquarters, Department of the Army approved Memorandum of Agreement (MOA) among the participating Military Departments and Defense Agencies. Specific issues such as manpower requirements and program management, which may be addressed through separate correspondence, are managed on a case by case basis by Army Acquisition Corps (AAC) Policy Office, Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA(ALT)) (SAAL-ZAC).

Army authorizations designated to support a Joint PMO in which the Army is not Lead Component will be carried on the AAESA TDA.

SAAL-ZAC develops and issues all tasks and directions to execute the AAEs decisions regarding the establishment of a Joint PM/PMO or Army participation in a joint program.

3.3.6.4 Assignment of Program Executive Responsibility

Point of Contact: Office of the Assistant Secretary of the Army (Acquisition, Logistics, and Technology), 2511 Jefferson Davis Highway, ATTN: SAAL-ZAC (Suite 10100), Arlington, VA 22202-3911

Dedicated oversight by a PEO or direct reporting PM is mandatory for all ACAT I programs. Acquisition categories of Weapons/ Automated Information Systems (AIS) programs are defined in paragraph 1.3 of DoD 5000.2-R.

When groups of existing programs interrelate in such a way as to warrant centralized direction, the AAE may designate a PEO to extend management oversight to these programs. An unrelated program may be centrally managed by a Direct Reporting PM. In either case, the PEO/PM reports directly to the AAE. As an extension of the AAEs management oversight, the PEO or direct reporting PM has the full line of authority for the centralized management of assigned program(s).

AIS programs will be centrally managed in the same manner as weapon systems or other materiel acquisitions unless otherwise specified.

Prior to consideration for centralized management by a PEO/PM, an acquisition program must have an approved Mission Needs Statement and successfully completed a favorable milestone decision, usually MS 1. Typically, one or more of the following factors will also significantly contribute to the decision to centrally manage a program:

1. Dedicated acquisition oversight is required because the program has significant impact on U.S. military posture; involves unusual organizational complexity, technological advancement, or interface control; presents unusual difficulties requiring centralized management; is required to satisfy an urgent requirement; has significant Congressional, DoD or DA interest; or requires extensive interdepartmental, national, or international coordination or support.

2. Program is best managed as a part of the program portfolio overseen by a PEO or, if unrelated to an existing portfolio, is identified for centralized management by a direct reporting PM.

3. Program is subject to major Pre-Planned Product Improvement (P3I) or major block upgrade(s) which meet the dollar threshold for an ACAT I program.

The AAE is the approval authority for designating a program for dedicated acquisition oversight. The AAE also has discretionary authority to designate an ongoing program for intensive, centralized management at any point in the program's acquisition life cycle and may designate a program to a higher ACAT level if greater dedicated oversight is required.

Requests to designate a program for dedicated acquisition oversight by a PEO/PM is submitted to the ASA(ALT), ATTN: SAAL-ZAC for approval by the AAE. SAAL-ZAC reviews the requests, coordinate all proposals for dedicated acquisition oversight, and provide recommendations to the AAE. SAAL-ZAC develops and issues all tasks and directions to the PEO/PM and Materiel Developer (MATDEV) to execute the AAEs decision regarding acquisition oversight. The AAE designates the appropriate level of centralized management (in other words, Program Manager, Project Manager, or Product Manager).

When a program no longer meets the criteria for PEO/PM oversight, the program will be reviewed by the AAE for transition to the non-PEO structure, systems, logistics, or materiel command or for termination.

Additional information on specific procedures and formats applying to centralized management of acquisition programs is provided in the following appendixes:

Establishing a PM ..... Appendix VIII
Transitioning a Program ..... Appendix IX
Disestablishing a Program Management Office ..... Appendix X
Terminating a Program ..... Appendix XI
Management of PM Owned Wholesale Stock ..... Appendix XV

3.3.6.5 Technical Representatives at Contractor Facilities

Point of Contact: HQDA, ATTN: SAAL-ZP, Skyline 6, Suite 309, 5109 Leesburg Pike, Falls Church, VA 22041-3201

3.3.6.6 Information Sharing and DoD Oversight

Point of Contact: HQDA, ATTN: SAAL-ZP, Skyline 6, Suite 309, 5109 Leesburg Pike, Falls Church, VA 22041-3201

3.3.7 Environmental, Safety, and Health Considerations

Points of contact:
HQDA, ATTN: DACS-SF, 200 Army Pentagon, Washington, DC 20310-0200
Commander, U.S. Army Center for Health Promotion and Preventive Medicine, ATTN: MCHB-TS-OHH, 5158 Blackhawk Road, Aberdeen Proving Ground, MD 21010-5422

The MATDEVs develop and periodically update a programmatic environment, safety and health (ESH) evaluation as an element of the Acquisition Strategy. The ESH section of the Acquisition Strategy addresses the materiel developer's strategy for identifying the requirements, and establishing the organization, responsibilities, milestones and budget estimates needed to evaluate the impact of environmental, safety, and health issues.

The MATDEV establishes three programs addressing system safety, hazardous materials management and pollution prevention. System safety and health hazard analyses are mutually supporting as are environmental/pollution prevention analyses and hazardous materials management. The Materiel Developer should consider implementing a single program encompassing these areas to more fully integrate the information needed for the risk management process.

The MATDEVs shall have System Safety programs to meet safety risk management requirements of AR 70-1, paragraph 1-4.n. The Safety Risk Management Process contains five steps: identify hazards, assess risk, make risk decisions, implement, and supervise. The system safety function supports the Materiel Developer's risk management process. The document that describes how the materiel developer will identify, track,

and manage the system hazards is the System Safety Management Plan (SSMP). As an integral part of the programmatic ESH evaluation, the SSMP should be included in the Acquisition Strategy, especially if the materiel developer has tailored the program's Risk Decision Authority Matrix (see AR 70-1, Table 1-1 for the DA standard) such that it changes the levels of decision authority from the DA standard.

The MATDEVs have programs addressing hazardous materials management and pollution prevention. However, NEPA is the driving force for all engineering and scientific analyses required to mitigate environmental impacts and establishing pollution prevention. Therefore, hazardous materials management should be a subset of pollution prevention. The goal is to prevent environmental impacts through pollution prevention activities, but if necessary, the use of hazardous materials must be managed until an alternative non-hazardous substitute becomes available.

The Army Health Hazard Assessment (HHA) Program supports the PM to meet health hazard risk management requirements of DoD 5000.2-R, AR 40-10, and AR 70-1. The health hazard risk management process, like the safety risk management process above, includes hazard identification, risk assessment, risk decisions, control implementation/evaluation, and supervision. The Army's HHA Program supports the PM with a formal HHA report which includes hazard identification, risk assessment and recommended controls to support the PM's risk decisions, implementation, and supervision. Health hazards are routinely included in safety hazard tracking systems and the SSMP to ensure that they are adequately addressed by the PM's environmental, safety, and health hazard risk management process.

Section 4.3.7 and DoD Acquisition Deskbook contains more detailed information for complying with environment, safety and health requirements.

3.3.8 Sources of Support

Point of Contact: HQDA, Office of the Deputy Chief of Staff for Logistics, 500 Army Pentagon, ATTN: DALO-SMM, Washington, DC, 20310-0500

Reference: AR 700-127, “Integrated Logistic Support.”

In accordance with DoD 5000.2-R, organic core depot maintenance capabilities must be maintained. But for those non-core related depot maintenance workloads, a competitive best value approach is required to determine organic or contractor depot level sourcing. The decision to go with either contractor depot support or organic depot support is based upon analyses of trade-offs of alternative support concepts that were performed as part of the early-on development process and the supportability analyses for system support. Utilizing a level of repair analysis assists in determining optimum support strategies among feasible alternatives. When determining depot level support, Integrated Logistic Support Managers (ILSMs) in conjunction with the Supportability IPT (SIPT) take into account such parameters as wartime operational readiness supportability, security implications, cost-effectiveness and warranties. Greater detail is given in AR 700-127.

If contractor depot support is planned, ILSMs plan for the availability of data suitable for competitive sourcing utilizing a best value approach. In the advent of a contractor provided depot support capability becoming obsolete, the ILSM in conjunction with the SIPT establishes an alternative plan to obtain the same depot level support that was previously provided.

For software-dependent systems, support can be performed by an organic software support agency/LCSEC, by the original software developer or by a third party software maintenance contractor. The acquisition and support strategies utilize the most cost effective and operationally effective mixture and phasing of the software support. Army LCSEC experts are available to participate in, support and review the formulation of the software support strategies to help ensure a solid long-term solution.

3.3.9 Warranties*

Point of Contact: HQDA, Office of the Deputy Chief of Staff for Logistics, 500 Army Pentagon, ATTN: DALO-SMM, Washington, DC, 20310-0500

Reference: AR 700-139, “Army Warranty Program Concept and Policies,” available on the Internet at: http://www.usapa.army.mil/gils/.

See referenced regulation for information regarding the Army warranty program.

* Information contained in corresponding paragraph of DoD 5000.2-R is not applicable to ACAT IA programs.

3.3.10 Corrosion Prevention and Control (CPC) (This paragraph is not present in DoD 5000.2-R.)

Point of Contact: U.S. Army TACOM ARDEC, Industrial Ecology Center Bldg 172, ATTN: AMSTA-AR-WET, Picatinny Arsenal, NJ 07806-5000

Reference: AR 750-59, “Army Corrosion Prevention and Control Program.”

Corrosion creates an enormous burden for the Army. It affects Army readiness, equipment reliability, and troop morale, but mainly the cost of maintenance and "ownership" of weapon systems. Corrosion, simply stated, is the process of unwanted degradation and deterioration, whereby a material (metal or non-metal) reacts with its environment. CPC is an important design consideration that impacts reliability and maintainability of Army materiel. Lack of attention to CPC can increase operation and support costs and adds to the Army logistics burden.

CPC continues as a concern throughout a systems life cycle. Although corrosion will never be completely stopped, its cost can be significantly reduced. The PM/MATDEV should develop a CPC Program to address the serious concerns of weapon system corrosion. The objectives of the program are to decrease life-cycle costs, increase system readiness by reducing equipment down time, and reduce the maintenance burden being placed on diminishing active and reserve work force resources. The PM/MATDEV should refer to AR 750-59 when formulating the CPC program.

3.3.11 Explosive Ordnance Disposal (EOD) (This paragraph is not present in DoD 5000.2-R.)

Point of Contact: Commander, US Army Armament Research and Development Command, ATTN: AMSTA-AR-FSX, Bldg 281, Picatinny Arsenal, NJ 07806-5000

References:
DoDD 5160.62, "Single Manager Responsibility for Military Explosive Ordnance Disposal Technology and Training."
AR 75-15, "Responsibilities and Procedures for Explosive Ordnance Disposal."
ARDEC Pam 70-3, "A Guide for Weapon Systems Developers."

All Army programs for acquisition of explosive ordnance (including applicable weapon delivery systems), combat vehicles, remotely piloted vehicles and aircraft (and for items that could be misidentified as Explosive Ordnance) shall include the development of EOD technical data (in accordance with the specifications of the Single Manger), and the recommendation of unique tools and equipment necessary for the render-safe and disposal of the explosive ordnance.

3.3.12 Modeling and Simulation (This paragraph is not present in DoD 5000.2-R.)

Points of contact:
Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), ATTN: SAAL-DO, 2511 Jefferson Davis Highway, Suite 10100, Arlington, VA 22202-3911
Army Modeling and Simulation Office, 1111 Jefferson Davis highway, Crystal Gateway North, Suite 503 (East), Arlington, VA 22202

References:
Under Secretary of Defense (Acquisition and Technology) memorandum dated 16 March 1998, "Modeling and Simulation in Defense Acquisition"
ASA(RDA) and AMC memorandum dated 20 September 1996, "Modeling and Simulation Support of the Army Acquisition Process.
"Simulation Support Plan Guidelines," May 1997. Available from SAAL-DO or the internet at: www.sarda.army.mil/sard-zd/ssp.htm.

Modeling and simulation (M&S) are seeing increasing application as tools to support all aspects of the acquisition process, and play a critical role in acquisition reform. To capitalize on its full potential, M&S must be planned for in the Acquisition Strategy. The PM articulates his M&S strategy via the Simulation Support Plan (SSP).

1. SSP Development Process. The PM can develop his SSP via 3 different approaches:
   a. Integrated Product Team (IPT),
   b. Delegate to Army Activity (AMSAA, STRICOM, RDEC, etc), or
   c. Contractor.

Experience indicates the most effective SSPs development method is via an M&S IPT that leverages the synergism among the M&S community. M&S IPT participants may include AMC; Army Materiel Systems Analysis Activity (AMSAA); the Simulation, Training and Instrumentation Command (STRICOM); the Operational Test & Evaluation Command (OPTEC); the Test & Evaluation Command (TECOM), TRADOC; Army Test and Evaluation Agency; and RDECs. This is a suggested list and is not meant to be neither prescriptive nor all-inclusive in nature.

During the development process, the PM should review the Army Modeling and Simulation Office's (AMSOs) Army Standards Repository System (ASTARS) at http://www.msrr.army.mil/astars. ASTARS is an on-

line system that provides Army approved M&S standards (in other words, procedures, practices, processes, techniques, algorithms, and heuristics). Additionally, the Army node of the DoD Modeling and Simulation Resource Repository (MSRR) at http://www.msrr.army.mil, is a source of M&S tools that the PM may be able to reuse. If these repositories do not meet a PMs needs, the PM should contact AMSO to identify their requirement. If the PM subsequently develops an M&S tool to meet the requirement and that product has a potential for reuse by other programs, the product should be submitted as a product standard.

2. SSP Coordination. The final approval of the SSP rests with the PM. When development of a draft SSP has been completed, the plan should be coordinated with:

a. The Army's three M&S Domains (Research, Development, and Acquisition (RDA) Domain; Advanced Concepts and Requirements (ACR) Domain; and Training Exercises and Military Operations (TEMO) Domain);

b. The Army Modeling and Simulation Office (AMSO);

c. Deputy Chief of Staff for Simulation Analysis, TRADOC;

d. HQs AMC; and

e. The Deputy Under Secretary of the Army (Operations Research).

This coordination effort can be assisted by SAAL-DO on the behalf of the PM. Within the RDA Domain, the SSP should be coordinated throughout the four sub-domains. Coordination within the Army's M&S Domain's and RDA M&S Sub-Domain's provides further opportunity to ensure that M&S resources are expended wisely within the entire Army. It is important to note that coordination does not indicate approval. The SSP is the PMs plan. The PM retains full sovereignty over the contents and substance of the SSP. Once the PM has approved the SSP, it should be presented to the applicable RDA M&S Sub-Domain Manager. This allows the RDA M&S Domain to fulfill its stewardship goals of M&S reuse, leverage, and visibility.

3. SSP Format. Although a sample SSP format is presented in the May 1997 SSP Guidelines, the key to a truly useful SSP is not the format, but a planning methodology that leads to an executable plan. A recommended planning methodology is located at Appendix XXVI.

3.4 Test and Evaluation

Point of Contact: HQDA, ATTN: DACS-TE (TEMA), 200 Army Pentagon, Washington, DC 20310-0200

References:
AR 73-1, “Test and Evaluation Policy.”
DA Pamphlet 73-1, “Test and Evaluation in Support of Systems Acquisition.”
DA Pamphlet 73-2, “Test and Evaluation Master Plan Procedures and Guidelines.”
DA Pamphlet 73-3, “Critical Operational Issue and Criteria (COIC) Procedures and Guidelines.”
DA Pamphlet 73-4, “Developmental Test and Evaluation Guidelines.”
DA Pamphlet 73-5, “Operational Test and Evaluation.”
DA Pamphlet 73-6, “Live Fire Test and Evaluation Guidelines.”
DA Pamphlet 73-7, “Software Test and Evaluation.”

All test and evaluation as it supports the acquisition process is intended to provide information regarding risk and risk mitigation, to the Army decision makers when considering a systems programmatic progress throughout the developmental life cycle and prior to major milestone decision reviews. The purpose of Test and Evaluation (T&E) is to assess progress toward whether systems are operationally effective, suitable, and survivable as defined by the user. Army programs are structured to integrate all developmental test, operational test, live fire test, system evaluation, and modeling and simulation as a continuum. The Army calls this Integrated Test and Evaluation (ITE).

The T&E community is postured to support all streamlined acquisition initiatives. ITE is designed to integrate Developmental Testing (DT) and Operational Testing (OT) where appropriate, cost effective, test requirements and evaluations are not compromised, and to eliminate test redundancies. ITE works best in acquisition streamlining when the T&E community is invited into the process prior to Milestone 0. If not invited at that time, maximum effectiveness of streamlined test and evaluation support cannot be realized.

While the Army goal is to integrate both developmental and operational test and evaluation (DT&E/OT&E) activities and reports, current laws and regulations governing DT&E and OT&E differ. DT&E and OT&E are discussed in separate paragraphs to address these differences. These distinctions also allow this pamphlet to mirror DoD 5000.2-R for an easy cross-reference capability.

3.4.1 Test and Evaluation Strategy

Same Point of Contact and References for paragraph 3.4.

Planning for a T&E strategy begins in Phase 0, Concept Exploration. The ITE process ensures that the test and evaluation program supports the Acquisition Strategy (AS) and that it harmonizes objectives and thresholds in the ORD. In addition to supporting the AS and harmonizing objectives and thresholds, the TEMP incorporates program measures of effectiveness (MOEs) and measures of performance (MOPs). As the materiel developer designs the AS, he should design into contract instruments all test and evaluation support considerations designed to reduce test schedules and test events (such as contractor testing) which might support the independent test and evaluation team in their final evaluation. And, to maximize these events and their results, the test and evaluation team must ideally help design test and evaluation support requirements into the materiel developers contract and prepare to witness and support the contracted test events.

3.4.2 Developmental Test and Evaluation

Same Point of Contact and References for paragraph 3.4.

Developmental Test and Evaluation is conducted throughout the acquisition process to assist in the engineering design and development of a system and to verify that developmental performance specifications have been met. DT is conducted to provide data with which to assess compliance with critical technical parameters, identify technological and design risks, and determines readiness to proceed to operational testing. DT substantiates the achievement of contractor technical specifications.

The independent system evaluator assists in the engineering design and development. The evaluator accomplishes this task through continuous evaluation by examining the performance and support requirements, and determining the degree to which the technical parameters of the system have been met. Through the ITE process, the evaluator optimizes the use of data obtained from models, simulations, and test beds, as well as tests conducted on prototypes or full-scale development models of the system.

3.4.3 Certification of Readiness for Operational Test and Evaluation

Same Point of Contact and References for paragraph 3.4.

Prior to making the final decision to enter the operational test phase of program development, the system must be certified by the materiel developer, combat developer, training developer, and the Commander of the test player participants as ready for test. The specifics dealing with the format agencies are required to use when submitting Operational Test Readiness Statements (OTRS) are covered in DA PAM 73-5.

The intent of the OTRS is to gain final consensus amongst all the acquisition participants that a whole system (hardware, software and manpower) has matured to an acceptable level of risk that justifies the investment in Operational Test and Evaluation.

3.4.4 Modeling and Simulation

Points of contact:
HQDA, Deputy Chief of Staff for Operations and Plans, ATTN: DAMO-ZS, 400 Army Pentagon, Washington, DC 20310-0400
HQDA, ATTN: DACS-TE (TEMA), 200 Army Pentagon, Washington, DC 20310-0200

References:
AR 5-11, “Management of Army Models and Simulations.”
DA Pam 5-11, “Verification, Validation, and Accreditation of Army Models and Simulations.”
Army Technical Architecture (ATA), available on the Internet at:
http://www.hqda.army.mil/techarch/.

Modeling and simulation are seeing increasing application as tools to support all aspects of the acquisition process, and play a critical role in acquisition streamlining. Constructive (for example, war-gaming), and virtual (such as human-in-the-loop) simulations and simulators are used to aid in concept exploration; often in conjunction with training exercises. Virtual prototyping, synthetic environments and stimuli, system stimulators, and hardware-in-the-loop simulation are useful in selecting, demonstrating and validating technologies and designs. Virtual factory design, logistics modeling, and testing with modeled operational scenarios and synthetic environments and stimuli support Engineering and Manufacturing Development (EMD).

Modeling and simulation also support the test and evaluation process by enhancing pre-test planning and rehearsal, providing a wider, safer span of test environments, and allowing extrapolation of live test results. In general, the more “live” the testing, the more credible the data. But live test runs are often more costly, hence fewer trials are run, and less data results. With the right mix, simulation can be used to lower the cost of live testing, and live testing is used to increase the fidelity of simulations. The result should be a reduction in the

total testing required. Modeling and simulation can not be used to replace the OT required by section 2399, title 10 United States Code (10 USC 2399) but may be used to enhance or supplement OT results.

Verification, validation, and accreditation are essential for modeling and simulation to be useful in program decision making. Models are validated based on comparison of results with knowledge and experience gained from actual observation (live test or field experience).

The PM modeling and simulation planning process should address:

1. A plan for the verification, validation, and accreditation of models to be used for program decision-making.

2. Integrate of the use of modeling and simulation across program planning activities and functional disciplines (examples are training, testing, logistics planning, design, and manufacturing).

3. A plan for the use of modeling and simulation throughout the life cycle (for example requirements definition, development, fielding, stockpile maintenance, training, technology insertion).

4. A plan for the reuse and support of modeling and simulation across other programs (for example leveraging existing models, horizontal technology integration, and support of related systems).

Early involvement of planners from across the functional disciplines is essential to successful integration of modeling and simulation for program success.

3.4.5 Operational Test and Evaluation

Same Point of Contact and References for paragraph 3.4.

The requirement to conduct OT is found in the provisions outlined in 10 USC 2399 for ACAT I and II programs. Operational Test and Evaluation (OT&E) is conducted prior to a MS III full rate production decision to evaluate a systems operational effectiveness, suitability, and survivability. Data collected in support of an OT&E can satisfy materiel developer requirements beyond just the MS III decision and ACAT I and II programs. These other uses include materiel releases as well as justification to plan and program additional resources to support system modifications or improvements.

Along with those mandatory procedures outlined in DoD 5000.2-R, Army procedures are discussed in detail in DA Pam's 73-1 through 73-7.

All aspects of operational effectiveness, suitability and survivability must be evaluated under anticipated combat conditions or conditions of planned employment. Operational evaluations reflect the system in a realistic environment with the typical users, support, and threat personnel and equipment. Credible T&E is highly dependent on how well a realistic operational environment can be duplicated.

The final product of a Test and Evaluation program is the System Evaluation Report (SER). The SER is the report that provides the data and analysis from all DT, M&S, OT, and other events that answer the effectiveness, suitability and survivability questions about the system under evaluation. The results of the SER are reported to the MDA by the independent system evaluator. Further discussion of the SER and other reports is provided below and in DA Pam's 73-1 through 73-7.

3.4.6 Operational Test and Evaluation Plans

Same Point of Contact and References for paragraph 3.4.

The System Evaluation Plan (SEP) has replaced the previously used Operational Test and Evaluation Plan (TEP) and Developmental Independent Evaluation Plan (IEP) under the ITE process. The SEP is prepared by the OPTEC System Team (OST), in coordination with the Test and Evaluation IPT (T&E IPT), and approved by Commander OPTEC or his delegated authority. The SEP is a single source document intended to detail and integrate the evaluation and the tests or events necessary to assess a system throughout its life cycle.

The SEP identifies all evaluation and event concepts, scope, funding and resourcing necessary to ensure an independent Army evaluation is in place to:

1. Confirm the system meets the technical design specifications contracted for by the Government prior to each test or evaluation event.

2. Identify critical operational issues that will be addressed and how they will be answered through tests/events and evaluations.

3. Identify measures of performance to be addressed in tests/events, factors and conditions governing test/event execution, required sample sizes, and descriptions of how the test/events will be conducted.

The Outline Test Plan (OTP) is prepared by the tester and evaluator and submitted by the OST through Headquarters OPTEC, to the Test Schedule and Review Committee (TSARC). The OTP is the planning

document used throughout the T&E community as well as TRADOC and Forces Command (FORSCOM) for general test planning, scheduling, funding and execution.

3.4.7 Use of System Contractors in Support of Operational Test and Evaluation

Same Point of Contact and References for paragraph 3.4.

DoD 5000.2-R provides a thorough discussion of this, as does 10 USC 2399. In short, the use of a major defense acquisition program contractor in support of OT&E is restricted by 10 USC 2399 that states in part "no person employed by the contractor for the system being tested may be involved in the conduct of the operational test and evaluation."

3.4.8 Production Qualification Test and Evaluation*

Same Point of Contact and References for paragraph 3.4.

The Production Qualification Test is a system level test conducted to ensure design integrity over the specified operational and environmental range and to verify the system is ready for the initial operational test. (See DA PAM 73-4.)

* Information contained in corresponding paragraph of DoD 5000.2-R is not applicable to ACAT IA programs.

3.4.9 Live Fire Test and Evaluation*

Same Point of Contact and References for paragraph 3.4.

DoD 5000.2-R provides a thorough discussion of this topic, as does DA PAM 73-6.

* Information contained in corresponding paragraph of DoD 5000.2-R is not applicable to ACAT IA programs.

3.4.10 Foreign Comparative Test (FCT)

Same Point of Contact and References for paragraph 3.4.

Foreign Comparative Testing is a section 2350a(g), title 10, United States Code initiative centrally managed by Director, Test Systems Engineering and Evaluation (DTSE&E). (See AR 73-1.)

3.4.11 Test and Evaluation Master Plan

Same Point of Contact and References for paragraph 3.4.

All acquisition strategies include a comprehensive and efficient T&E program. The Test and Evaluation Master Plan (TEMP) is the basic planning document used for all life cycle T&E that are related to a particular system acquisition and is used by all decision bodies in planning, reviewing, and approving T&E activity. All programs require a TEMP except level VI information systems and drugs and vaccines that fall under parts 50, 56, and 312, title 21, Code of Federal Regulations.

The approved TEMP is the basic reference document used by the T&E community to generate detailed T&E plans and to ascertain schedule and resource requirements associated with a T&E program. A more thorough discussion of the TEMP is located in DA PAM 73-2.

Army policy directs that every Army acquisition program will have a TEMP. The OTP is a formal resource planning and tasking document that is prepared for TSARC review. All programs must have an Army approved TEMP before they can compete in the TSARC process for resources and commitments to provide such resources.

3.4.12 Joint Test and Evaluation (JT&E) Program (This paragraph is not present in DoD 5000.2-R.)

Point of Contact: HQDA, ATTN: DACS-TE (TEMA), 200 Army Pentagon, Washington, DC 20310-0200

The JT&E program is a Congressionally mandated program managed under the Director, Test, Systems Engineering & Evaluation (DTSE&E). These tests are concept based, not acquisition based, must be joint, and working to resolve a relevant joint problem. The criteria for a JT&E are:

1. To assess multi-service interoperability;
2. To evaluate technical and operational performance of interrelated/interacting systems under joint combat conditions;
3. Validate system development and testing methodologies having multi-service application;
4. Evaluate improvements to joint technical and operational concepts.

3.5 Life-Cycle Resource Estimates

Point of Contact: Office of the Assistant Secretary of the Army (Financial Management and Comptroller), ATTN: SAFM-BUI, 109 Army Pentagon, Washington, DC 20310-0109

3.5.1 Life-Cycle Cost Estimates

Points of contact:

U.S. Army Cost and Economic Analysis Center (CEAC), ATTN: SFFM-CA-PA, 5611 Columbia Pike, Falls Church, VA 22041-5050

Commander, U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM), 5158 Blackhawk Road, ATTN: MCHB-TS-OHH, Aberdeen Proving Ground, MD 21010-5422

References:

DoDD 5000.4, “OSD Cost Analysis Improvement Group (CAIG).”

DoD 5000.4-M, “Cost Analysis Guidance and Procedures.”

AR 11-18, “The Cost and Economic Analysis Program.”

“Department of the Army Cost Analysis Manual,” July 1997, available on the Internet at: http://www.ceac.army.mil/.

“Department of the Army Economic Analysis Manual,” July 1995, available on the Internet at: http://www.ceac.army.mil/.

DoD acquisition policies provide the basic framework for the development, documentation, and presentation of materiel and information systems' life cycle cost estimates. Specifically addressed are the requirements for a Program Office Estimate (POE), Component Cost Analysis (CCA), Independent Cost Estimate (ICE), Economic Analysis (EA), force cost estimates or other cost analyses.

This overview of cost analysis discusses the process for developing, analyzing, validating and documenting cost estimates using analytical approaches and techniques. The process involves analyzing and estimating incremental and total resources required supporting past, present, and future forces, units, systems, functions, and equipment. Cost analysis assesses the cost implications of new technology, new equipment, new force structures, or new operating or maintenance concepts. The life cycle cost estimate includes the program's total environmental, safety, and health (ESH) costs; HHA medical costs and lost-time avoided provided by USACHPPM as part of the HHA Report (HHAR) endorsement or by request; cost impact of schedule; and an assessment of cost that includes estimating technical risk and uncertainty. It determines the funds required for a given level of training or operational activity such as miles driven per year.

Cost analysis is an integral step in the selection among alternatives by the decision-maker. As a management tool cost analysis and cost estimates are used to help decision-makers evaluate resource requirements at key management milestones and decision points. In this regard, cost analysis and the cost estimates support the Planning, Programming, Budgeting, and Execution System (PPBES) process. This includes formulating and documenting Army cost positions on programs within the Program Objective Memorandum (POM) and the budget estimate submission (BES) processes.

Introduction to the Cost Analysis Process

Cost analysis is the scientific process used to evaluate the resources required to develop, test, produce, procure, train, operate, maintain, replace or eliminate units, forces, systems, functions and equipment. The cost analysis process requires a thorough understanding of the item and its phases of evolution. Cost analysis includes the identification of assumptions and constraints, the acquisition and evaluation of relevant data and the application of reasonable cost theories, methods, models, and techniques. The process includes testing of results for reasonableness and sensitivity to the assumptions. Results are usually expressed in terms of dollars and include a discussion of the quality of data, methods and results.

The cost analysis process can be applied to either a small portion of a complex item or the total item. An example of this is the analysis of the cost difference between single year and multi-year procurement strategies of a materiel subsystem. Cost analysis may be applied to the item's total life cycle or to a single phase of the life cycle. Additionally, cost analysis can be applied to evaluate the relative cost differences between competing alternative solutions.

A cost estimate results from the cost analysis of a particular item. It is based upon specific information: a definition of the item, phase of evolution, life cycle portions costed, assumptions, approach employed, data sources, elements costed. The estimate should be sufficiently documented to allow outside reviewers to easily track the logic from the assumptions, through the methodologies and models to the conclusion.

A POE is a life cycle cost estimate that is developed by the materiel system proponent to support specific acquisition milestone requirements. Specific documentation formats are required for the POE. The POE uses

cost element definitions that are common with those used by both the Deputy Assistant Secretary of the Army (DASA) (Army Budget) and the Director, Program Analysis and Evaluation. A key document for development of the POE is the Cost Analysis Requirements Description (CARD) which includes the system description, acquisition strategy, fielding plan, and projected operations.

A CCA is developed for major materiel systems (ACAT IC) by the U.S. Army Cost and Economic Analysis Center (CEAC) to support specific regulatory acquisition milestone requirements. Under certain circumstances explained in the Cost Analysis Manual a CCA may be developed for ACAT ID programs. The CARD also functions as a basic starting position for the CCA. The CCA is used to test the reasonableness of the POE and to provide a second opinion of a system's cost.

The Army Cost Position (ACP) is the Army's approved life cycle cost estimate for the materiel system. It is used for DoD milestone reviews and is the basis for Army planning, programming and budgeting. For all major programs, the Cost Review Board (CRB) develops the proposed ACP after an intensive review of both the POE and CCA or CAIPT single estimate. This proposal becomes the ACP when it is approved by the Assistant Secretary of the Army for Financial Management and Comptroller (ASA(FM&C)) and then is provided to the Army Acquisition Executive. The Cost Analysis Brief (CAB) documents the justification and the rationale for any changes from the POE and CCA to the ACP. DoD 5000.2-R requires the component's cost position. The CAB satisfies this requirement for milestone reviews.

Cost Analysis Uses and Limitations

Cost analysis is a critical element in the Army acquisition process. Quality cost analysis is required to efficiently manage changing military requirements. Cost analysis supports management decisions by quantifying the resource impacts of alternative options among different hardware designs, software designs, personnel requirements, and operating and support concepts.

The POE and CCA initially fulfill the statutory (section 2434, title 10, United States Code) requirements for program cost estimates for major milestone reviews. As a program matures, the POE and CCA grow in complexity and detail as more relevant factual information is available. The true test of the utility of cost analysis is the ability to respond quickly to program turbulence caused by either internal Army changes in military priorities or external changes such as congressional direction. Army planners must have reliable, quickly available information on the logical cost consequences of program changes, extensions, or cancellations that only a prepared cost analysis community can provide. After a reprogramming decision is made, the cost analyst should document the logic used to ensure that the program is executable.

Cost analysis plays a key role in budgeting the Army's operating tempo (OPTEMPO) related training costs. The Army's implementation of the DoD Visibility and Management of Operating and Support Cost (VAMOSC) program is the Operating and Support Management Information System (OSMIS). CEAC is responsible for the OSMIS program. The Army collects and publishes operating and support data by materiel system. CEAC uses this data to infer historic materiel system OPTEMPO performance. CEAC develops and reports reparable and consumable OPTEMPO costs by MACOM for over 200 tactical systems. OPTEMPO cost factors developed by CEAC incorporate the impact of major supply policy changes, such as those caused by Defense Management Review Decision (DMRD) 901 and 904c. The OSMIS cost factors are used to develop the P2 mission budgets across the Army.

For expert support in estimating software design and development costs as well as software support and maintenance costs, the appropriate Life Cycle Software Engineering Center (LCSEC) may be consulted.

The Army uses cost analysis to:

1. Support decisions on program viability, structure and life cycle resource requirements.
2. Evaluate the life cycle cost implications of alternative materiel system designs.
3. Provide credible and auditable cost estimates in support of milestone reviews throughout the acquisition and PPBES processes.
4. Assess the financial implications of new equipment, force structures, operating/maintenance scenarios and technology.
5. Formulate and document the Army budget positions on programs within the BES process.
6. Determine the funds required by appropriation for a given level of readiness or OPTEMPO.

Cost analysis applies scientific and statistical methods to evaluate the likely cost of a specific, defined system in a defined future scenario. In the real world there are multiple uncertainties relating to materiel acquisition cost. Internal uncertainties influencing cost can be traced to inadequate system definition, poor contract statements of work, overly optimistic statement of solution to problems, poor management and success

oriented scheduling. External uncertainties include schedule and funding turbulence, contractor misunderstanding of technical complexity, contractor's future problems on other efforts adversely impacting the estimated work and excessive (or minimal) oversight. In spite of uncertainty, the process of cost analysis is the most rigorous approach available to evaluate the cost consequences of alternatives for the decision-maker.

Cost analysis cannot:

1. Produce results that are more valid than input data.
2. Be applied without tailoring to fit the problem.
3. Provide relevant solutions to irrelevant questions and problems.
4. Predict political and non-cost impacts.
5. Substitute for sound judgment, management or control.
6. Make final decisions.

Another useful analytical tool to support the decision making process is economic analysis. Economic analysis is the systematic objective determination of both the cost and the benefits of completing courses of action that meet the same requirement by determining the most efficient and effective utilization of resources. Economic analysis extends cost analysis to assess the benefits of the alternatives and provides a rigorous approach to problems of equal cost and unequal benefits, unequal cost and equal benefits and unequal costs and unequal benefits. Economic analysis provides management visibility to a broad range of issues such as base closure, lease/buy decisions and materiel system effectiveness. An Analysis of Alternatives (AoA) is an economic analysis which compares operational effectiveness (benefits) of alternatives to the costs of the alternatives.

Key Cost Analysis Interfaces

Cost analysis plays a key role in the Army's PPBES. In the planning process, the ACP provides the most credible estimate of the system's resource requirement. In the programming phase, cost analysis and the ACP are the foundations for multiple what-if analyses providing the logical basis for the cost impact of changes in schedule, quantity, production rate dependencies or the impact of increased technical challenges. In the budgeting phase, cost analysis responds to the problem of evaluating the impact of funding limits on the program schedule and unit costing. There has been considerable work to ensure that the cost estimating structure is directly related to the needs of the PPBES, and this work continues. There is a joint effort to assure that cost, budget and programming documents use identical definitions Army-wide. In the execution phase of the PPBES process, cost analysts are called on to review Cost/Schedule Control System reporting, when available, and evaluate contract cost growth which may directly impact program execution.

CEAC cost analysts play an important role in the Army Program Budget Committee's (PBCs) OPTEMPO subcommittee. Army flying hour rates and ground vehicle OPTEMPO cost factors are used to formulate the MACOM General Purposes Forces (P2) budgets. Additionally, these OPTEMPO factors are provided to the cost analysis community for use in the development of future cost estimates.

In summary, cost analysis plays an important role in both the Army acquisition process and PPBES process by providing dependable, credible and timely estimates of the cost consequences of management decisions.

Procedures

AR 11-18 provides the policies and responsibilities for cost and economic analysis throughout the Army. The DA Cost Analysis Manual provides the framework for implementing the cost analysis policies set forth in AR 11-18. The DA Economic Analysis Manual provides the framework for implementing the economic analysis policies of AR 11-18.

3.5.2 Manpower Estimates*

Point of Contact: HQDA, Deputy Chief of Staff for Operations and Plans, ATTN: DAMO-FDJ, 400 Army Pentagon, Washington, DC 20310-0400

References:
AR 71-9, “Materiel Requirements.”
TRADOC Pam 71-9, “Requirements Determination.”

Limited information concerning Manpower Estimates is contained in AR 71-9. HQDA DCSOPS is developing additional Army guidance at this time.

* Information contained in corresponding paragraph of DoD 5000.2-R is not applicable to ACAT IA programs.

3.6 Program Plans

Point of Contact: U.S. Army Materiel Command, ATTN: AMCRDA-AP, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001

This paragraph provides a list of program plan formats included in this pamphlet. Quoting from DoD 5000.2-R, “Program plans, excluding the TEMP, are not required in support of milestone decisions and shall not be used as milestone documentation or as periodic reports.” Preparation guidance and format for the planning documents can be foundin the following appendixes.

Transition Plan ..... Appendix IX
Termination Plan ..... Appendix XI

Part 4
Program Design

4.1 Purpose

Point of Contact: U.S. Army Materiel Command, ATTN: AMCRDA-AP, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001

4.2 Integrated Product and Process Development

Point of Contact: U.S. Army Materiel Command, ATTN: AMCRDA-TE, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001

Reference: "Department of Defense Guide to Integrated Product and Process Development," February 5, 1996

Integrated Product and Process Development (IPPD) is a systematic approach to the integrated, concurrent design of products and their related processes, including manufacturing and support. This approach is intended to cause the developers, from the outset, to consider all elements of the product life cycle from conception through disposal; including quality, cost, schedule, and user requirements.

Integrated Product and Process Management (IPPM) describes the Army concept for managing the system acquisition process. The IPPM concept draws on the system's engineering tools and overlays a management concept that encourages the use of Integrated Process Teams (IPTs). The Army interacts with the contractor's IPPD process in its role as a customer and as the IPPM manager. These responsibilities involve establishing performance requirements, managing total program progress, and evaluating product quality. The responsibilities extend throughout the life cycle.

IPPM IPTs are established early in acquisition programs and will be the primary forum for challenging requirements and their associated costs, managing total program progress, and evaluating product quality throughout the life cycle. Refer to paragraph 1.6, Integrated Product Teams, and the DOD deskbook for further information.

4.3 Systems Engineering

Points of contact:

Office of the Assistant Secretary of the Army (Acquisition, Logistics, and Technology), 103 Army Pentagon, ATTN: SAAL-DE, Washington, DC 20310-0103.

Commander, U.S. Army Materiel Command, ATTN: AMCRDA-TE, 5001 Eisenhower Ave., 22333-0001

Reference: Joint Aeronautical Commander's Group "Performance Based Business Environment Products," January 1997, available on the Internet at:
http://www.nalda.navy.mil/jacg/pbpdg.pdf.

Systems engineering is the interdisciplinary approach to the evolution and verification of integrated and optimized product and process designs. The objective of systems engineering is to provide a comprehensive, structured, and disciplined approach for requirements allocation and concurrent product and process designs. Systems engineering is applicable to new developments, upgrades, and to modifications. For guidance purposes, the Performance Based Business Environment (PBBE), as described in "Performance Based Business Environment Products" (see reference), is recommended. The documents, while authoritative in nature, are only used for guidance and not made mandatory contract requirements. A more detailed summary description of these documents is included below:

1. Integrated Performance Based Business Environment Guide. This guide provides top-level guidance on formulating and modifying the acquisition strategy, as well as providing guidance on post award/change risk management, post production sustainment, and post award/change contractor performance assessment.

2. Risk Management Pamphlet. This is a guide for defining common, effective risk management process elements. It also provides guidance to help program teams establish and execute a framework for planning, assessing, handling and monitoring risks for all systems, subsystems, hardware and software acquisition programs.

3. Performance Based Product Definition Guide. This document provides top level guidance for the complete technical information set necessary to support acquisition and sustainment strategies. The guide describes a number of processes based on performance-based initiatives to include:

a. Systems engineering based information required to enable flexible and cost effective product life cycle management,

b. Management, control, and ownership of the product technical definition consistent with increased contractor control and government long-term business strategy, and

c. Foundation for Open System/competition based life-cycle product acquisition strategies.

4. Joint Service Guide Specifications (JSGS). These documents are a set of generic performance-based specifications providing guidance on the requirements allocation method for key elements within the aeronautical specification tree.

5. Key Supplier Process Handbook. This document describes top-level, generic, key management processes for program execution used by aeronautical business sector suppliers to support defense acquisition and sustainment. These processes include:

a. Program/data management.

b. Engineering.

c. Manufacturing.

d. Quality.

e. Procurement/subcontract management.

f. Logistics.

6. Flexible Sustainment Guide. This document describes a process to implement acquisition reform in an orderly manner. It is based on principles that address long term operational and support issues to maximize operational capability and optimize investment strategies.

Broad based guidance for systems engineering is found in DoD 5000.2-R. As a result of this guidance, the Materiel Developer should:

1. Tailor the necessary guides of the Performance Based Business Environment to the management of systems engineering in acquisition programs.

2. Apply the functional engineering disciplines identified in DoD 5000.2-R to the systems engineering process. The materiel developer matrix support can provide functional engineering support to program managers as needed.

3. Develop memoranda of agreement between the Program Managers (PMs), through the respective PEO, DSA, or MSC when applicable, and the supporting command(s) to establish the basis for reimbursement for matrix support.

4. Apply the following framework to communicate systems engineering requirements from Government to Industry:

a. Pre-Award.

(1) Use the Systems Engineering approach to identify the appropriate system requirements at the lowest life cycle cost. The acquiring agency should include systems engineering criteria in their statement of work (SOW).

(2) Ensure systems engineering is suitably addressed in the source selection evaluation plan.

(3) Solicit each offeror to identify in their response, their systems engineering approach (skills, trade-off processes and candidate selection criteria), capabilities (training, tools, and techniques), and technology building block candidates to be used in executing product designs.

(4) Solicit each offeror for methodology and tools to be employed in simulating and assessing the product design prior to building hardware.

b. Post-award.

(1) Ensure each contractor identifies the process for generating design alternatives and the requirements allocation process.

(2) Ensure each contractor identifies decision making criteria for design trade-off (for example, life cycle costs, producibility, environmental and facilities considerations).

(3) Ensure each contractor identifies decision support systems (such as simulation).

(4) Use the System Requirements Reviews for the contractor's presentation of the systems engineering trade-offs and results of design simulation for Government review.

(5) Use Critical Design Reviews (CDRs) for the contractor's demonstration that the proposed design meets all contractual requirements for Government review.

(6) Ensure the contractor demonstrates progress made on the concurrent process development to support the chosen design during the various reviews.

4.3.1 Manufacturing and Production*

Points of contact:

Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 103 Army Pentagon, ATTN: SAAL-DE, Washington, DC 20310-0103.

U.S. Army Materiel Systems Analysis Activity, ATTN: AMXSY-T, Rock Island, IL 61299-7260

References:

DODD 4245.7-M, “Transition From Development to Production.”

SAALT Guide for the Preparation of Army Acquisition Programs for Review by the Army Systems Acquisition Review Council (ASARC) and the Information Technology Overarching Integrated Product Team (IT OIPT) (Incorporated into Appendix XXIV).

NAVSO P-6071, “Best Practices.”

* Information contained in corresponding paragraph of DoD 5000.2-R is not applicable to ACAT IA programs.

1. Production Engineering and Planning.

a. Production engineering and planning (PEP) activities are an integral part of the concurrent engineering development effort. At each Milestone Decision Review (MDR) the producibility and production readiness risks should be identified and assessed.

b. Preparations for the ASARC MDRs are described in Appendix XXIV—Preparation Guide for ASARC/IT OIPT Acquisition Program Reviews. The ASARC Overarching (OIPT) reviews the necessary documentation for the MDR. The manufacturing and production functional area assessments for the ASARC OIPT are prepared by the Production Readiness Working IPT (WIPT). The structure/composition of this and other WIPTs is shown in Table 4, Typical ASARC/IT WIPT Structure, of Appendix XXIV.

c. Inadequate PEP activities can make the transition from development to production difficult and costly; often causing stretching-out of planned production quantities or reduction in the production quantities. If PEP activities, using DoDD 4245.7-M as a framework, commence early in the development life cycle and continue through development, many risks associated with transitioning from development to production can be minimized prior to full-rate production.

2. Commercial and Non-Developmental Item (CaNDI) Application.

There is increasing use of commercial item, NDI, or modifications of either, to meet DoD weapon system needs. For modifications, the PEP activities should be tailored to the amount of development effort occurring and the intended acquisition strategy (AS). For true commercial items and NDI (item already exists, use as is, no changes), production readiness issues are normally restricted to those of production capacity, product quality, availability of sources, and design configuration control. In the more common case of modified commercial items or NDI, the full gamut of PEP activities are normally applied against the modification portion of the development/production effort.

3. Life-cycle Activities Overview.

a. Concept Exploration Phase. Integrating PEP considerations into the early systems engineering process establishes the framework for a smooth transition from development to production. The primary production engineering efforts during the Concept Exploration phase should be to identify manufacturing and producibility feasibility of design approaches, determine industrial base capability, and identify manufacturing technology barriers (such as areas of limited experience, new materials, extreme tolerances, etc.). Trade-off studies and manufacturing technology projects are initiated to improve manufacturing feasibility, producibility, and industrial base capability. Manufacturing and production engineers may already be included as members of IPTs.

b. Program Definition and Risk Reduction Phase. As the design trade-offs are explored and prototype units are built, producibility trade-off studies continue, and manufacturing technology requirements are identified. Initial manufacturing process selection/consideration occur concurrent with design development. Manufacturing and production engineers serve as members of IPTs.

c. Engineering and Manufacturing Development Phase. As the design matures, the techniques of value analysis can be applied to eliminate functions that do not add value. Production engineering considera-

tions should include standardizing parts; designing for manufacturing; minimizing part counts; proving out the production processes, equipment, and tooling; identifying long lead items needed for prototype fabrication, LRIP, or full rate production; reducing or eliminating hazardous and/or environmentally damaging production materials; reducing cycle and assembly times; and improving process yields. The manufacturing and producibility efforts should assure that the high-risk issues have been resolved and that production facilities and tooling will be in place as required.

d. Low Rate Initial Production (LRIP). LRIP occurs while the EMD phase is continuing, as test results and design fixes or upgrades are incorporated. LRIP quantities should be the minimum sufficient to provide production configured articles for operational tests, and to establish an initial production base to permit ramping-up to full rate production. Procurement lead times, sources of supply, and the manufacturing plan are finalized during LRIP.

e. Production, Fielding/ Deployment, and Operational Support Phase. IPTs, that include manufacturing engineers, will be responsible for manufacturing process improvements and the Engineering Change Proposals (ECPs) to carry out design enhancements or to correct recently discovered deficiencies in production items.

4. Planning For Production.

a. To minimize the risk associated with the transition from development to production, the MATDEV should consider a systematic PEP effort using DoDD 4245.7-M templates and NAVSO P-6071, Best Practices, as the framework to guide IPTs in this area. To maximize the benefits, this risk reduction planning effort should commence early in the development cycle and continue throughout. The planning should address the PEP activities, including producibility of the product design, to be accomplished by the Government and contractors during the development phases of the item.

b. This planning forms the basis for a system/product production readiness strategy to help guide the program's risk reduction efforts. The resultant production readiness strategy should be incorporated into the overall Acquisition Strategy in order to address production feasibility and production risk issues.

5. Implementation of PEP Risk Reduction Measures.

Once the overall program PEP risk reduction measures have been identified, the IPT should prepare a contract SOW that identifies the production readiness goals, objectives and requirements for the program. A source selection plan with evaluation factors should also be prepared for use in evaluating the bidder's proposed PEP efforts. Tools that can be used by the IPTs to monitor and evaluate the contractor's PEP progress include on-site program IPRs, producibility reviews, design reviews, program reviews, status reports, and Production Readiness Reviews (PRRs). The choice of these tools should be consistent with risk severity.

6. Reviews of Producibility and Production Readiness.

a. IPT Review. The IPT should be continually monitoring the status of PEP actions throughout the development program. Manufacturing and production members of the IPT review designs for producibility concerns as well as determine or develop manufacturing processes. No component, subsystem, or system design should be approved or implemented until the IPT has evaluated its producibility and satisfied itself that all concerns have been addressed.

b. Production Readiness Review (PRR). In some cases, a more in-depth review of contractor production readiness may be needed than can be done within the confines of the IPT meetings. In such instances, MATDEVs are responsible for planning and conducting PRRs. PRRs can be used to assess Government and contractor production readiness to enter production. PRRs provide for detailed reviews of Government and contractor plans, schedules, and accomplishments in preparation for the production program. The reviews should verify whether production planning and preparation is, or has, matured sufficiently; whether capabilities and capacities of facilities have been identified and developed; and that no major problems exist that would compromise the production program. PRRs should assess elements that could impact successful transition from development to production. This assessment can include design producibility and stability; ability to produce to required rates and costs; system ability to meet mission requirements; sufficiency/availability of the technical data package (TDP); and availability of logistics support documents, parts, and equipment. A series of PRRs may be necessary. DoDD 4245.7-M and NAVSO P-6071 can be used as the framework for the conduct of PRRs.

7. Production Engineering and Planning Support.

a. MACOM/MSC production engineering organizations may be available to provide PEP support to weapon system programs and IPTs.

b. The U.S. Army Materiel Systems Analysis Activity (AMSAA) also provides PEP support and consulting services. AMSAA can:

(1) Assist MATDEVs in formulating plans and evaluating system/product PEP, manufacturing feasibility, industrial base capability, and product producibility, as well as identifying production risk and risk reduction measures.

(2) Provide short term consultative and broker services within DA in the areas of PEP, producibility and PRR planning, problem solving, evaluation, and management.

(3) Conduct independent producibility and production readiness assessments of Army systems/products IAW AR 70-1.

4.3.2 Quality

Points of contact:

Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 103 Army Pentagon, ATTN: SAAL-DE, Washington, DC 20310-0103

U.S. Army Materiel Command, ATTN: AMCRDA-AI, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001

References:

Federal Acquisition Regulation, Part 9, “Contractor Qualifications”; Part 42, “Contract Administration”; Part 46, “Quality Assurance”; Part 52, “Solicitation Provisions and Contract Clauses.”

Defense Federal Acquisition Regulation Supplement, Part 209, “Contractor Qualification”; Part 242, “Contract Administration”; Part 246, “Quality Assurance”; Part 252, “Solicitation Provisions and Contract Clauses.”

DOD Index of Specifications and Standards.

American National Standard Institute/American Society for Quality Control (ANSI/ASQC) Q90 Series, “Quality Management and Quality Assurance Standards.”

AR 702-7, “Product Quality Deficiency Report Program.”

AMC Pamphlet 715-3, “Contracting for Best Value.”

Assistant Secretary of Defense memorandum, subject: “Achieving Continuous Quality Improvement,” 16 October 1986.

Army acquisition activities should plan and carry out a total life-cycle quality program with particular emphasis on the acquisition and support processes. All services provided and products designed, developed, purchased, produced, stored, distributed, operated, and maintained by or for the Department of Army, should conform to specified requirements, meet mission and operational demands, and result in customer satisfaction.

Army contracts reference FAR Part 46 and DFARS Part 246, which require contractors to implement an effective quality assurance program. Materiel developers (MATDEVs) and buying activities should work with contractors to build high quality products through disciplined control of processes, and not through reliance on end item inspection.

1. Concurrent engineering. In order to facilitate successful design, development, production, delivery / fielding, and maintenance of material that is fit for use, MATDEVs are encouraged to use concurrent engineering practices from inception of the design process. Concurrent Engineering is a systematic approach integrating product design with manufacturing capability, inclusive of support elements. This approach incorporates into the design process all elements of the life cycle from concept through disposal, ensuring that quality, cost, schedule, and user requirements are considered throughout the process.

2. Standardization documents. In accordance with Assistant Secretary of Defense memorandum dated 16 October 1986, subject: Achieving Continuous Quality Improvement, standardization documents may not reference Acceptable Quality Levels (AQLs). The Specification Preparing Activities should remove AQLs from every standardization document during the revision process.

3. Quality program requirements. In order to hold contractors accountable for the quality of their design, development, production and maintenance efforts, MATDEVs and buying commands should—

a. Include quantitative and definitive quality requirements, tailored to meet the needs of each acquisition, in all contracts.

b. Define, measure, and assess essential quality requirements for each phase of the life cycle.

c. Report significant quality issues to the Milestone Decision Authority at each Milestone.

d. Coordinate significant actions, as appropriate, with industry, Defense Contract Management Command, using activities, and depots.

4. To effectively implement Office of the Secretary of Defense guidance, the MATDEV or buying activity should—

a. Specify and design quality, reliability, and maintainability characteristics into the product down through component levels. Specify quantitative rather than qualitative characteristics whenever possible.

b. Use information yielded by the design analysis and developmental test activities to identify important product and process characteristics; and incorporate characteristics into the technical data package (TDP).

c. Establish quality assurance provisions in the TDP to identify acceptance/rejection criteria.

d. Assure achievement of quality and technical requirements for acquisition and support.

e. Perform test and evaluation to demonstrate performance, and take effective corrective action on deficiencies revealed. During Phase II (Engineering and Manufacturing Development), and Phase III (Production and Deployment), particular attention will be on preventing product deficiencies rather than detecting and correcting defects. Sample Lot Testing is one method for ensuring that requirements for testing to validate conformance to technical requirements is kept to the minimum necessary. Following prolonged periods of successful conformance validation it may be possible to reduce ongoing test requirements.

(1) Contracting officers may reduce all or some of the government or contractor conducted tests required by the contract, under the following conditions (these conditions apply to Army customers and other customers as well):

(*a*) The contractor has previously supplied the identical item(s) to the government and the government has accepted it(them), or

(*b*) The government has commercial test reports, performance data, analytical data, and/or vendor reports demonstrating that the item meets the contract requirements. The data have recently been obtained and there have been no changes to the end item design and/or configuration since collecting the data. The government may accept the results of equivalent tests from identical production processes that have been approved for other customers in determining whether the contract requirements have been met.

(2) In addition, the contractor can submit requests to delete certain tests before the delivery of the affected end item. If the government agrees to delete a test after contract award, a downward adjustment in the contract price may be negotiated. All requests for test deletion must contain:

(*a*) The specific identity of the prospective test deletion;

(*b*) Demonstration of the conditions in 1(a) and 1(b) above;

(c) A certificate of completion per DI-MISC-80678.

(3) Prior to contract award, the contractor can also submit equivalent test data along with the bid or proposal as evidence of compliance to contract requirements. This bid or proposal must also include an alternate price that reflects how the bid or proposal price would change if the government approved the test data. However, the contractor must also propose to meet all required tests, and propose a price for those tests, in the event the contracting officer denies the request.

f. Adequately control configuration or engineering changes.

g. Perform design reviews and/or independent evaluations/assessments before each milestone review decision, and take effective corrective actions on deficiencies revealed. Provide a copy of the assessment report to the appropriate review authority.

h. Perform inspection and acceptance for non-developmental and commercial items at the most economical point of delivery (source or destination.) Use certificates of conformance whenever in the best interest of the Government.

i. Promote continuous improvement and the use of statistical process control (SPC) to reduce process variability and to control processes. Use statistically valid measures of process improvement, and move toward acceptance of products and services based on process control rather than final inspection.

j. Maintain objective evidence of inspections made under the quality system/program. Effectively manage metrology and calibration processes to assure the integrity of test and inspection equipment. Requirements for services from the National Institute of Science and Technology (NIST) will be identified as soon as possible.

k. Assure that contractors adequately manage the quality of products and services provided by their subcontractors.

l. Identify and control critical application items throughout the product's life cycle. The Army Critical Safety Item Program outlines four distinct activities to assure the integrity of critical material: the identification and control of critical safety items (to include critical characteristics); service life surveillance, performance feedback and analysis, and corrective actions/improvements. Ensure specific emphasis is placed on those functions crucial to personnel safety, environmental protection, and prevention of system loss or damage.

m. Perform quality audits, as needed, during the design, development, acquisition, and sustainment processes to ensure products and services meet customer needs.

n. Minimize the impact of corrosion/material deterioration on the soldier through increased readiness and reduced operating and maintenance costs. This requires that the materiel procured, stored and fielded incorporates corrosion prevention and control (CPC) through effective design practices, material selection, protective finishes, production processes, packaging, storage environments, and maintenance procedures.

5. Insure that an acceptable program is established for the validation and control of acceptance test procedures, software and equipment used for “performance verification” and obtaining DD250 acceptance.

6. Source selection. The Federal Acquisition Regulation requires that contractor past performance be a significant source selection factor for most major contract awards (see FAR 15.304(c). The companion AMC Pamphlet 715-3, “Contracting for Best Value,” provides approaches for considering contractors' quality history in source selection. FAR Part 42.15 and its supplements describe the requirements for maintaining data on contractor performance.

7. Continuous process/product improvements.

a. In accordance with DoD 5000.2-R, Part 4, paragraph 4.3.2, Army acquisition activities may implement continuous improvement strategies with their segment of the industrial base. The objectives are to develop robust designs, achieve a smooth transition into production, and deliver hardware, software and logistical support that are fit for use in the field. The MATDEV or buying activity representatives may work with individual suppliers to establish quality goals and facilitate process improvements at the supplier's facility.

b. Contractors should be encouraged to integrate the principles of concurrent engineering into the design, development, manufacture, and deployment of hardware and software. This approach is intended to cause the developers, from the outset, to consider all elements of the product life cycle from conception through disposal, including quality, cost, schedule, and user requirements. Modern quality practices can significantly improve design robustness and reduce process and product variability, for example:

(1) Design of experiments.

(2) Quality function deployment.

(3) Identification and control of critical process control parameters.

(4) Environmental Stress Screening (ESS) as a tool for improving the robustness of the design and identifying and controlling process parameters on tactical hardware (primarily electronic components).

(5) Statistical process control.

c. Process capability, defined as a long-term measure of the performance of the process against the technical requirements, provides significant insight into the contractor's ability to supply a conforming product. Contractors may calculate and monitor process capability of critical and major processes, and target achievement of process performance indices (Cpk) of greater than 1.33 for major processes, and 2.0 for critical processes. In major item source selections, MATDEVs or buying activities should assess process capability as part of the technical risk assessment process. A Cpk of significantly less than 1.33 for a major process indicates that the process is only marginally under control and represents high technical risk. Similarly, a critical process with a Cpk less than 2.0 represents increased technical risk.

8. Oversight. The FAR stipulates that contractors are responsible for the quality of their products and services. Army activities must assure that material conforms to quality, performance, safety, reliability, and maintainability standards of the TDP and contract. The MATDEV or buying activities adjusts government oversight and/or production acceptance testing requirements commensurate with contractors' demonstrated performance. The MATDEV or buying activity assess their contractors' progress/performance and allocate oversight resources IAW technical risk. Technical risk factors which determine oversight include: progress of the development effort IAW program milestones, test results, quality of delivered products and services, adherence to schedule, effectiveness of process controls and internal audits, control of vendor-supplied material, and the results of contractor's efforts to improve quality and productivity. Validated contractor data should be a primary factor in determining oversight requirements.

a. A Quality Assurance Letter of Instruction (QALI), issued to the cognizant Contract Administration Services, highlights potential problem areas and identifies mandatory product verifications. The MATDEV or buying activity determines QALI requirements based on material criticality, customer feedback, experiences with like items, etc. The issuing authority may revise the QALI (either relax or tighten requirements) when appropriate.

b. The MATDEVs may assign on-site technical representatives to contractor facilities to facilitate the design, development and production of critical programs. The DFAR Subpart 242.74 prohibits technical representatives from performing Contract Administration Services functions. When technical representatives establish on-site residency, the MATDEV and Defense Contract Management Command Chief should sign a Memorandum of Agreement to identify their respective roles. Also see paragraph 3.3.6.5 of DoD 5000.2-R.

c. Army activities may conduct on-site audits to assess the contractor's performance against contractual requirements, verify control of critical management and development/production processes, facilitate continuous process improvement activities and resolve field problems.

9. Corrective action. MATDEVs and buying activities should operate a product deficiency reporting and correction system. The closed-loop corrective action (CA) system requires analysis of quality performance data and effects real quality improvements. This CA system includes: problem identification, root cause analysis, correction of the cause of the problem, demonstrated effectiveness of the corrective action, correction of all like items not meeting quality requirements, and problem prevention. The Army may reject or require the correction of material or services that do not conform to contractual requirements. This right is subject to contractual provisions regarding inspection and acceptance.

10. NATO/international logistics quality program elements. Army activities conducting NATO/International military operations should include requirements in their quality program to:

a. Perform quality assurance services on NATO/International military sales and ensure conformance to technical and quality requirements on the same.

b. In accordance with the governing NATO Standardization Agreements, specify NATO Allied Quality Assurance Publications (AQAP) and NATO Allied Reliability and Maintainability Publications (ARMP) requirements in contracts awarded to other NATO countries. Delegate QA services to the host government whenever satisfactory services are available.

11. Commercial quality standards.

a. DoD policy emphasizes the use of commercial practices and standards that can meet military needs. As applied to quality, DoD will recognize supplier quality programs that meet Government needs whether they are modeled on military, national, or international quality system standards. DoD and industry use of quality system standards and the related practices need to be more flexible and efficient. The intent is to use improved process control and product quality to lower cost by endorsing a single quality system in contractor facilities.

b. The ISO-9000/ANSI/ASQC Q9000 model quality system series standards are listed in the DoD Index of Specifications and Standards (Standardization Documents Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094 (215) 697-2569) and are approved for use. DoD practices must take full advantage of commercial standards and more innovative approaches to quality. Therefore, in requests for proposals (RFPs), offerors should be encouraged to adopt the ANSI quality standards, but should also be given the option of proposing to meet contract requirements using other quality systems, including the existing military standards if desired. To preclude unnecessary expenditures on the part of offerors, registration/certification to the ISO/ANSI quality standards is not required as part of an RFP.

4.3.3 Acquisition Logistics (and Integrated Logistics Support (ILS)) (This section combines information pertinent to paragraphs 4.3.3 through 4.3.3.4 of DoD 5000.2-R.)

Points of contact:

HQDA, Office of the Deputy Chief of Staff for Logistics, 500 Army Pentagon, ATTN: DALO-SMM, Washington, DC, 20310-0500

U.S. Army Materiel Command, ATTN: AMCLG-ME, 5001 Eisenhower Avenue, Alexandria, VA. 22333-0001

U.S. Army Training & Doctrine Command, ATTN: ATCD-SL, Bldg 134, 20 Whistler Ln, Fort Monroe, VA. 23651-5194

Training & Doctrine Command Analysis Center Lee (TRAC-LEE,) ATTN: ATRC-L, 401 First St., Suite 401, Fort Lee, VA

U.S. Army Logistics Support Activity, ATTN: AMXLS-AI, Redstone Arsenal, AL. 35898-7466

Director, Evaluation Analysis Center, ATTN: CSTE-EAC, Bldg. 4120, Susquehanna Avenue, Aberdeen Proving Grounds, MD. 21005-3013
U.S. Total Army Personnel Command, ATTN: TAPC-PLM, 2461 Eisenhower Avenue, Alexandria, VA 22331

References:
AR 602-2, "Manpower and Personnel Integration (MANPRINT) in the System Acquisition Process."
AR 700-127, "Integrated Logistic Support."
AR 700-129, "Management and Execution of Integrated Logistics Support (ILS) for Multiservice Acquisitions."
AR 700-142, "Materiel Release, Fielding, and Transfer."
DA Pamphlet 700-28, "Integrated Logistics Support Program Assessment Issues and Criteria."
DA Pamphlet 700-55, "Instructions for Preparing the ILSP."
DA Pamphlet 700-142, "Instructions for Materiel Release, Fielding and Transfer."
TRADOC Reg 350-70, "Training Development Management, Process, and Products."
TRADOC Pamphlet 71-9, "Requirements Determination."

This section outlines requirements and procedures used to plan, program, develop, acquire, test, evaluate/assess, train, and deploy (concurrent with fielding of a new/modified weapon system/item) all the necessary support resources to ensure the supportability and readiness of the system/item when fielded. The ILS process ensures the support resources required to keep a system/item and supporting training devices in an operational ready status throughout its operational life are identified and developed in a timely and cost effective manner. When the Combat Developer (CBTDEV) selects the best support concept during the acquisition process, the Materiel Developer (MATDEV) establishes the Supportability Integrated Process Team (SIPT), formerly known as the ILS Management Team (ILSMT), to provide detailed implementation of the support concept and develop the Supportability Strategy (SS). The SIPT considers numerous alternatives and trade-offs. This Supportability Analysis (SA) is required to identify the optimum support system requirements. Both the MATDEV and CBTDEV perform SA tasks (either in-house or through contractors) applicable to their respective mission responsibilities as defined in AR 700-127, Integrated Logistic Support. Life Cycle Software Engineering Centers (LCSECs) should serve as members of the SIPT and provide support for the supportability analysis of software-dependent systems, regardless of whether the LCSEC will perform software maintenance and support or only have a coordination role.

4.3.3.1 General

The ILS process pursues two thrusts simultaneously. The first is design influence in order to reduce operating and support costs and simplify equipment operation and maintenance. The second concerns the design of support, identification of resources, development and acquisition of the necessary support resources, and fielding of support to assure satisfactory operation and readiness of the system/item. The effectiveness of the first thrust reduces demands on the second. In the case of Commercial Off The Shelf / Non-developmental Item (COTS/NDI) acquisitions, the ILS thrust is attained by focusing on the source selection process.

Logistics support is a programmatic concern being an integral part of system performance including operational and performance characteristics of the system (DoD 5000.2-R). Thus, the effectiveness of an ILS program requires strong management, involvement, a tailored SIPT, and close coordination among SIPT members so that ILS is integrated throughout the materiel acquisition process. The Integrated Logistics Support Manager (ILSM) as the chairman of the SIPT work in conjunction with other members of the SIPT and the PM IPT. ILS strategies and requirements are developed IAW the strategies and requirements of the PM IPT. Continued coordination and cooperation between the CBTDEV and MATDEV ILS organizational elements and the PM IPT is essential.

In an effort to operate within resource constraints, the CBTDEV and MATDEV ILS communities generate improvements in readiness support and supportability related system design through -

1. Jointly developing necessary Manpower and Personnel Integration (MANPRINT) plans and strategies.
2. Jointly developing an early-on ILS program and SS (formerly known as the ILSP).
3. Use of SA and Human Systems Integration (HSI) analytical techniques for the performance of ILS program objectives.
4. Development and/or change of doctrine, policy and procedure.

5. Investigation of HSI, SA and other analytical techniques for deriving manpower, personnel, training and logistics impacts from the mission needs determination and other CBTDEV and MATDEV analyses.

6. Identification of -

a. Contract incentives.

b. System Readiness Objectives (SROs).

c. Modification candidates.

d. Embedded training capability/options.

7. Emphasis on commercial, other Service and allies technical advances in supportability characteristics and techniques.

The CBTDEV and MATDEV in coordination with the Logistician, Office of the Deputy Chief of Staff for Logistics, jointly establish an ILS program. The CBTDEV is principally responsible for identifying and documenting general ILS requirements and constraints through studies and analysis and for developing the SA strategy during the Concept Exploration Phase. Generally, lead responsibility for ILS transfers to the MATDEV upon entry into the Program Definition and Risk Reduction Phase. For Class VIII, medical materiel, the U.S. Army Medical Materiel Agency (USAMMA) is the independent logistician and ILS evaluator for most new, modified and displaced medical equipment/systems.

ILS functional activities may be time constrained if improper program attention is focused on the program schedule. Actions should be taken to show impacts to schedule constraints and ensure realistic program schedules to include support planning and actions can be properly addressed. ILS activities may often have to be tailored to optimize overall program scheduling requirements.

The process outline discussed in this section is an example of a developmental program. Tailoring of ILS activities must be compatible with the tailoring of the materiel acquisition process, activity initiation dates and the elapsed time allocated to development, production and fielding.

4.3.3.2 Procedures

1. Pre-Concept Exploration (CE) Phase activities.

a. ILS issues, logistic deficiencies and opportunities for improvement are evaluated by the CBTDEV proponent during performance of experimentation and analyses in support of requirements determination. The CBTDEV accomplishes the following:

(1) Identifies logistics, HSI and training issues/deficiencies. The MANPRINT Joint Working Group (MJWG) chaired by the CBTDEV develops a SMMP jointly with the MATDEV.

(2) Identifies and/or supports HSI and logistics improvement/doctrine studies.

(3) The Integrated Concept Team seeks DTLOMS solution sets in the requirements determination process. In developing solution sets based on approved concepts and future operational capabilities (FOCs), the ICT will range through the DTLOS domains before initiation of a Mission Need Statement or materiel solution for a requirement. It considers experience, studies, experiments and analyses. Supportability must be a part of these activities as ICT results often drive constraints and subsequent requirements for systems support.

(4) Utilizes SA to identify the user's desired system support concept (maintenance, supply, transportation, etc.).

b. The MATDEV accomplishes the following:

(1) Utilizes information base (logistics experience reports, system assessments, etc.) to identify materiel; Manpower, Personnel and Training (MPT); and logistics constraints and improvement opportunities.

(2) Examines ILS implications in technology base assessments and experimentation.

(3) Evaluates equipment change proposals for supportability implications.

(4) Identifies improvement opportunities to the Training and Doctrine Command (TRADOC) proponent.

c. The CBTDEV proponent school initiates preparation of the Mission Need Statement (MNS) or Operational Requirements Document (ORD) based on approved results of an ICT recommending a materiel solution for the Future Operational Capabilities addressed. The CBTDEV and the MATDEV ILS representative, the trainer, the Logistician and HSI points of contact ensure that ILS and HSI considerations are included in appropriate Joint Working Group (JWG) analyses and decisions.

2. Concept Exploration Phase activities.

a. The materiel developer designates an individual to serve as the MATDEV ILS representative and advises the CBTDEV, Deputy Chief of Staff for Logistics (ODCSLOG) and Evaluation Analysis Center (EAC). The ILS representative provides ILS support and interface to the CBTDEV. To support the CBTDEV proponent's SA effort, Army Materiel Command (AMC) Logistics Support Activity (LOGSA) (AMXLS-A), has been designated as the AMC focal point to assist the CBTDEV.

b. The CBTDEV, in conjunction with the MATDEV ILS representative and ICT, if applicable, establish a SIPT to orchestrate ILS activities. SIPT membership is as listed in AR 700-127. Normally, the CBTDEV chairs the SIPT; however, the CBTDEV and MATDEV may co-chair the SIPT to facilitate communication and establish easier tasking authority in both commands.

c. The CBTDEV exercises lead responsibility for:

(1) Development of the SMMP and the Operational Requirements Document (ORD). The SMMP serves as a planning and management guide and an audit trail to identify the tasks, analyses, trade-offs and decisions that must be made to address HSI issues during the materiel development and acquisition process. Results from these tasks, analyses, and trade-off decisions are the basis of the ILS development of the system/item and its associated support. Fundamental procedures for SMMP are contained in AR 602-2 and discussed in paragraph 4.3.8.1—Manpower and Personnel Integration (MANPRINT). The ORD serves as the bridge between the MNS and the APB. It identifies minimum acceptable operational performance parameters needed to satisfy the mission need. The parameters established in the ORD set the framework for which the SA strategy is developed.

(2) Supportability Analysis Documentation. The CBTDEV, in coordination with LOGSA and the MATDEV, prepares the SA strategy during the initial phase of the ORD and Operational Mode Summary/Mission Profile (OMS/MP) data. A tailored SA program is required to support development of ILS element requirements and/or constraints and supportability design requirements. This information must be consistent with the ILS information contained in the SMMP, MNS and ORD.

(3) Concept Studies. The TRADOC ILS program planner exercises overall lead agency responsibility for the ILS content of the studies. The MATDEV ILS representative is responsible for the ILS content of the Trade-off Determination. The CBTDEV and MATDEV ILS representative are jointly responsible for the ILS portion of the Trade-off Analysis. The CBTDEV is responsible for preparation of the Analysis Of Alternatives (AoA), with input from the MATDEV functional cost offices and the LCSEC for software dependent systems.

(4) Preparation of System Training Plan (STRAP). The CBTDEV ensures the appropriate Training Development proponent initiates actions to develop, coordinate and distribute the STRAP. Through a coordinated effort, the CBTDEV and MATDEV ILS representative ensure that the schedules and milestones outlined in the STRAP for the training subsystem are integrated into other ILS plans and requirements. This includes scheduling the availability of the hardware and other resources to satisfy the requirements of the STRAP.

(5) Required Military Support Posture. Prior to Milestone (MS) I, the CBTDEV establishes the acceptable military support posture. This assists the MATDEV in establishing mandatory milestone events during the acquisition process. The MATDEV ILS Manger ensures that updates to the Supportability Strategy (SS) reflect the minimum required military support posture.

d. The MATDEV exercises lead responsibility for:

(1) Preparation of the initial Supportability Strategy (SS).

(*a*) The MATDEV ILS representative ensures that the SS is used as the source document for ILS input into other program management documentation (for example the Test and Evaluation Master Plan (TEMP) and the Acquisition Strategy (AS)). Timelines and format of the SS are listed in AR 700-127 and DA PAM 700-55, respectively.

(*b*) The CBTDEV assists the MATDEV ILS representative in developing the initial SS. The MATDEV ILS representative ensures mutually satisfactory resolution of issues and concerns.

(c) The MATDEV ILS representative summarizes the crosswalks between the SS and other key documents, such as the SMMP, STRAP, (AS), and specification/Statement of Work (SOW) to ensure compatibility of any stream lining actions.

(d) The SS is coordinated with all other materiel acquisition program participants. See AR 700-127 and DA PAM 700-55 for coordination and approval requirements.

(e) For the balance of the acquisition program, the MATDEV maintains currency of the SS and continued coordination with the CBTDEV and other principal SIPT members.

(2) Preparation of the AS. The MATDEV ensures that ILS considerations are fully addressed in developing the AS. The approved SS and ILS content of the approved AS reflect an interactive ILS planning effort. The ILS input is coordinated with the CBTDEV and SIPT members. The CBTDEV provides assistance in developing alternate ILS strategies and impact assessments.

(3) Preparation and analysis of a Transportability Report (TR). The MATDEV submits a TR to the MTMC-TEA no later than 90 days prior to MS I. The TR describes the transportability characteristics of problem items designated by the MATDEV for development and evaluation during the Program Definition and Risk Reduction Phase. The Transportability Engineering Analysis (TEA) of the TR developed by MTMC-TEA must be available prior to the decision review.

3. Program Definition and Risk Reduction Phase activities.

a. Detailed work for ILS begins in this phase, thus the materiel proponent designates an individual to serve as the ILS Manager (ILSM) for each acquisition program. Refer to AR 700-127 for MATDEV and ILSM roles and responsibilities. The CBTDEV, who ensures that all ILS program actions are fully coordinated within the CBTDEV community, advises the MATDEV ILSM, and those other ILS participants cited in paragraph 4.3.3.2 2c above. The SIPT previously established by the CBTDEV continues to function. However, since the MATDEV now has the lead responsibility for the program, the MATDEV ILSM chairs the SIPT. The CBTDEV ensures that required CBTDEV participants are advised and attend SIPT meetings, as necessary. Organization and use of the SIPT, as a management tool, are listed in AR 700-127. When a SA review team is established as a subset of the SIPT, the ILSM extends membership to the CBTDEV. The CBTDEV ensures that additional CBTDEV participants attend SA review team meetings, as necessary. Based on the results of the CE Phase, the SA review team ensures that the overall SA process is tailored to the system, reflects the current design configuration and identifies and optimizes those Manpower, Personnel, and Training and logistics requirements necessary to support the materiel system.

b. In relation to solicitation documents and contracts:

(1) The MATDEV ILSM ensures that the CBTDEV and principal SIPT members are invited to submit input to the solicitation package.

(2) The MATDEV materiel proponents coordinate the Statement of Work (SOW) with principal SIPT members. The CBTDEV ensures that ILS input/comments are provided.

(3) The materiel developer establishes formal coordination procedures with CBTDEV proponent schools/centers. The coordination procedures allow the proponent schools/centers to identify desired source selection factors/criteria. The CBTDEV reviews the SOW package on a priority basis and responds within 30 working days, so as to prevent adverse impact on procurement administrative lead times.

(4) In finalizing the SOW package, the MATDEV reviews comments and resolves all issues. Responsibility for the SOW package rests with the MATDEV.

(5) The MATDEV ILSM, who is a member of the Source Selection Evaluation Board (SSEB) and the contracting officer's negotiation team, provides technical representation on all matters pertaining to ILS.

(6) All proposed contract changes that could impact CBTDEV requirements, concepts, or ILS objectives are coordinated with the CBTDEV prior to adoption.

(7) The ILSM should contribute to development of the source selection criteria. Ensure the ILS portion is suitably addressed in the Source Selection Evaluation Plan.

c. The materiel proponent takes action, supported as required by the MATDEV ILSM and the CBTDEV, in the following areas:

(1) AS Update. The AS and SS are updated concurrently and provide source information for each other.

(2) ILS Test and Evaluation Actions. Ensures that (1) ILS test objectives, issues and criteria are developed and incorporated into test plans and planning, conduct of tests and test evaluation reports (this includes the requirement for the Logistics Demonstration (LD) and logistics related modeling and simulation); (2) Test and Evaluation IPT includes ILS representation from the CBTDEV and MATDEV; (3) the SSP and New Equipment Training (NET) Package are complete and delivered within established milestones and are thoroughly tested during DT and OT; and (4) the Doctrinal and Organization Test Support Package (D&O

TSP) is complete and delivered within established milestones to support OT. The D&O TSP and Training Test Support Package are complete and delivered within established milestones to support OT.

(3) ILS Funding. The MATDEV ILSM accomplishes the following:

(*a*) Plans, programs and identifies budget requirements for the ILS effort. Close coordination is maintained between the MATDEV ILSM, CBTDEV, and the Training Developer (TNGDEV) to ensure ILS requirements are adequately funded.

(*b*) Identifies ILS funding shortfalls, proposed remedial funding action, and coordinated actions proposed, in the SS. The MATDEV ILSM, CBTDEV, and the TNGDEV mutually agree on the impact and appropriate action to resolve funding issues. ILS funding depends on the life-cycle status of the end item in question.

(4) Supportability Analysis (SA) Documentation. Based on the results of the CE Phase, the MATDEV (with assistance from the CBTDEV and the LCSEC for software-dependent systems) updates all applicable SA documentation and databases.

(5) New Equipment Training Plan (NETP). The MATDEV ILSM ensures actions are taken by the NET manager to coordinate development of the NETP with the trainer and CBTDEV and to provide a copy of the approved plan to the logistician.

(6) Transportability Report (TR). An updated TR, and additional TEA and a Transportability Approval document (by MTMC-TEA) are required prior to MS II.

d. The system proponent takes action, supported as required by the MATDEV and the ILSM, in the following areas:

(1) Supportability Strategy (SS) and SMMP. The SS and SMMP are updated throughout the life cycle. For the balance of the acquisition program, the CBTDEV maintains currency of the SMMP in coordination with the MATDEV, who has responsibility for the SS. Staffing and approval of SMMP is described in AR 602-2 and in AR 700-127 and DA PAM 700-55 for the SS.

(2) Operational Requirements Document (ORD). The CBTDEV ensures ILS considerations are specifically addressed in appropriate sections of the ORD, in accordance with Appendix II of DoD 5000.2-R. The CBTDEV and MATDEV ILSM maintain continuous dialogue during ORD staffing and approval. The CBTDEV ensures mutually satisfactory resolution of MATDEV ILS comments.

(3) Basis of Issue Plan/Qualitative and Quantitative Personnel Requirements Information (BOIP/QQPRI). The ILSM ensures that initial and subsequent QQPRI and BOIP Feeder Data are generated and provided to the U.S. Army Force Management Support Agency (USAFMSA) for BOIP preparation, QQPRI and BOIP coordination, and BOIP and QQPRI approval processing within the required time frame. In preparing the initial QQPRI, the MATDEV utilizes the STRAP as well as the SA and HSI data for baseline information and constraints. However, some Clothing and Individual Equipment (CIE) items do not require a BOIP or QQPRI. CIE items utilize a streamlined approach in which DA Form 5965-R (Basis of Issue for Clothing and Individual Equipment) is used.

(4) System Training Plan (STRAP). The CBTDEV ensures that the appropriate Training development proponent develops the STRAP simultaneously with the Materiel Requirements Document (MRD). The STRAP will accompany the MRD during staffing. The STRAP is approved prior to sending the MRD to HQ TRADOC for approval. The CBTDEV ensures that the appropriate Training development proponent updates the STRAP prior to MS II.

4. Engineering and Manufacturing Development Phase Activities.

a. The purpose of the Engineering and Manufacturing Development (EMD) phase is to design, build, and test a complete system. Therefore, the ILS efforts become more specific during this phase. While primarily the responsibility of the MATDEV ILSM, continued coordination and cooperation between the CBTDEV and MATDEV ILS organizational elements is essential. The SS is updated to reflect the maturity of the materiel system and its associated support concept and continues to be the tool for management planning and coordination in this phase.

b. Other ILS related documents and activities (solicitations/contracts, T&E actions, ILS funding, BOIP/QQPRI, STRAP, and TR/TA) in the Program Definition and Risk Reduction Phase are updated and expanded as appropriate. The MATDEV ILSM employs SA and SA documentation to fully define the ILS elements required to support system deployment. A reaffirmed Transportability Approval (TA) from MTMC-TEA, in response to the materiel proponent's TR, is required prior to MS III.

c. The MATDEV ILSM ensures preparation and distribution of the initial Materiel Fielding Plan (MFP). CBTDEV input into the preparation of the initial MFP is provided by the CBTDEV in the time frame established by the ILSM. Preparation, coordination, and distribution requirements for all draft MFPs are as specified in AR 700-142.

d. ILS reviews, in accordance with AR 700-127, are conducted prior to program or decision reviews. The OPTEC System Team (OST) includes an ILS assessment in the System Evaluation Report (SER) to support the decision review. The logistician provides recommendations to the Milestone Decision Authority based on the ILS assessment in the suitability section the SER. DA Pam 700-28 provides guidance for assessing ILS program status at key decision milestones.

e. The supportability of the system is initially verified during the conduct of the Logistics Demonstration.

5. Production, Fielding/Deployment, and Operational Support Phase activities.

a. Management actions during the Production, Fielding/Deployment, and Operational Support Phase require MATDEV coordination with the gaining commands as well as the CBTDEV. All participants utilize SIPT or some other combined planning group to facilitate integrated planning and coordination.

b. The MATDEV ILSM, in coordination with the CBTDEV, ensures that solicitations and contract documents contain provisions for all ILS elements required to support initial and continuing deployment of materiel systems.

c. Total Package Fielding (TPF) is the Army's standard materiel fielding process (see AR 700-142 and DA PAM 700-142 for successful implementation of TPF).

d. The MATDEV ILSM is an active participant in the materiel release process (refer to AR 700-142). The MATDEV ILSM obtains a training assessment from the Trainer's POC prior to the meeting of the Materiel Release Review Board (MRRB). The assessment of training support capability of the system is a major factor in determining the readiness of the system for fielding release. The assessment at a minimum includes an examination of the Trainer's ability to support the system with:

(1) Resident/nonresident training instruction.

(2) Extension training materials.

(3) Field Manuals.

(4) The Army Training and Evaluation Program (ARTEP).

(5) Training devices and associated support requirements.

(6) Adequate technical publications.

(7) Adequate training base equipment.

e. The CBTDEV coordinates with the proponent school and logistics school (if different) regarding efforts to formulate the institutional training assessment. The CBTDEV, in coordination with the TNGDEV, provides the MATDEV ILSM any additional comments pertinent to overall system supportability for consideration by the MRRB. Additionally, OPTEC provides an ILS assessment to support the Materiel Release decision.

f. The OPTEC System Team (OST) includes an ILS assessment in the System Assessment (SA) or System Evaluation Report (SER) to support the Materiel Release decision. The logistician provides recommendations to the MRRB based on the ILS assessment in the suitability section the SA or SER. DA Pam 700-28 provides guidance for assessing ILS program status at key decision milestones.

g. Subsequent to fielding, CBTDEV and MATDEV develop data sources and analysis techniques to identify and prioritize improvements needed to enhance materiel and support systems.

h. Following the fielding of an ACAT I, II, or III system, equipment performance and readiness data is monitored to collect information not available during development and acceptance testing. CBTDEV and MATDEV collect operation and support data to determine issues and items for use in determining operations and support cost reduction opportunities. This information may also be used to support a MS IV decision concerning modification programs.

6. Supportability Analysis Task Assignment. The SA process is the primary means through which the ILS community is able to influence design. A tailored SA program is required for all acquisition programs per DoD 5000.2-R, part 4. The requirements for SA task assignments are determined before entry into each acquisition program phase. SA task assignments are documented in the SA strategy document that is summarized in the SS. The “requiring authority” is either the CBTDEV or MATDEV. The requiring authority may make

arrangements (contracts, agreements, etc.) with a performing authority for actual task accomplishment. For all programs managed by a Special Task Force (STF) in the CE phase, the STF director is responsible for SA task accomplishment rather than the CBTDEV organization.

4.3.4 Open Systems Design

Point of Contact: Director of Information Systems for Command, Control, and Communications (DISC4), ATTN: SAIS-PAA, 107 Army Pentagon, Washington, DC 20310-0107

References:

Army Enterprise Architecture (AEA), available on the Internet at: http://arch-odisc4.army.mil/aes/html/homepage.htm.

Joint Technical Architecture—Army (JTA-A), available on the Internet at: http://arch-odisc4.army.mil/.

EIA/IEEE J-STD-016: 1995 “Standard for Information Technology-Software Life Cycle Processes—Software Development: Acquirer-Supplier Agreement.”

IEEE/EIA 12207.0-1996, “IEEE/EIA Standard, Industry Implementation of International Standard ISO/IEC 12207: 1995 (ISO/IEC 12207) Standard for Information Technology—Software life cycle processes.”

IEEE/EIA 12207.1-1997, “Guide for ISO/IEC 12207:1995 Standard for Information Technology—Software life cycle processes—Life cycle data.”

IEEE/EIA 12207.0-1997, “Guide for ISO/IEC 12207:1995 Standard for Information Technology—Software life cycle processes-Implementation Considerations.”

An open systems approach is a business approach for developing affordable weapons and command, control, communications, computers, and intelligence (C4I) systems. This approach chooses from among open system, de facto, and Government specifications and standards, and commercial practices, products and interface standards to provide quick access to technologies that maximize combat effectiveness under a given cost constraint. Open systems facilitate improving performance and reduced overall systems life-cycle costs by exploiting advances being made by industry in the fields of commercial electronic and software products.

Follow an open systems approach for all system elements (mechanical, electrical, software, etc.) in developing systems. This business and engineering strategy consists of choosing specifications and standards adopted by industry standards bodies or de facto standards (set by the market place) for selected system interfaces (functional and physical), products, practices and tools. Selected specifications are based on performance, cost, industry acceptance, interoperability requirements, long term availability and supportability, upgrade potential, and best value over the life-cycle of ownership. For many Army software-intensive systems, the industry standard most appropriate for acquisition and development is EIA/IEEE J-STD-016 (used as guidance only), which replaces MIL-STD-498, DOD-STD-2167A, and DOD-STD-7935A. IEEE/EIA 12207 is a high level standard which provides useful guidance for developing and evaluation an organization's common software process consistent with industry international standards; however, a sound implementation goes beyond just “compliance” with 12207 alone, and depends on other more detailed practices and standards such as J-STD-016.

For all C4I systems, information systems, and weapon systems that must interface with C4I systems or information systems, mandatory guidance concerning architectures, interfaces, and data is contained in the Army Enterprise Architect's (AEA) Joint Technical Architecture—Army (JTA-Army). The JTA-Army aligns itself with joint requirements contained in the Joint Technical Architecture (JTA) for interoperability and reuse (software, hardware, commercial products, and Government Off The Shelf (GOTS)).

The standards mandated by the JTA-A/JTA are followed when developing any system that produce, use, or exchange information electronically. The JTA-A will be used by anyone involved in the management, development or acquisition of new or improved Army systems.

Within the Army, the Vice Chief of Staff, Army and the Army Acquisition Executive have jointly made each Milestone Decision Authority (MDA), Major Army Command (MACOM), Program Executive Officer (PEO), Program or Product Manager (PM), Advanced Technology Demonstration (ATD) Manager, Advanced Concept and Technology Demonstration (ACTD) Manager, and Advanced Concept and Technology (ACT) II Manager responsible for compliance with the JTA-A. System developers will comply with the JTA-A in order to ensure that products meet interoperability, performance, and sustainment criteria. Combat developers will use the JTA-A in developing requirements and functional descriptions. Battle Labs will use the JTA-A to ensure that the fielding of their “good ideas” is not unduly delayed by the cost and time required for wholesale re-engineering to meet interoperability standards. Army Staff Principals will ensure that systems belonging to

the Headquarters Department of the Army (HQDA) and HQDA Field Operating Agencies (FOAs) comply with the JTA-A.

In order to fully achieve the Army XXI vision of total, seamless integration and synchronization of military power, the Army must achieve and maintain interoperability across a continuum of several dimensions at once:

1. Among battlefield weapon systems, sensors and shooters—tanks, aircraft, Unmanned Aerial Vehicles (UAVs);

2. Among command, control, communications, and intelligence (C3I) and Support systems;

3. Along the vertical and horizontal dimensions of organizational and command structures;

4. Across the Joint dimension among Army, Air Force, Navy, United States Marine Corps (USMC), JCS/Commander-in-Chief (CINC), & the Defense Information Systems Agency (DISA) at the lowest practical echelon;

5. Across the power projection dimension—from the sustaining base forward to the Company Command Post.

6. Across the time and technology generation dimension—to achieve backward and forward compatibility and interoperability.

The JTA-A supports the Army's needs over all these dimensions. Compliance is enumerated in an implementation/migration plan. A system is compliant with the JTA-A if it meets, or is implementing an approved plan to meet, all applicable JTA-A mandates. In practical terms, progress toward compliance is assessed through a migration strategy and a planning process that considers a host of resource, management, and operational issues that affect overall system development and determine the best approach for satisfying a validated user need. Army senior leaders have set a" Mark-On-The-Wall" for systems to comply with the JTA-A. They have mandated that by the end of 2000 all Division XXI systems must meet the critical interoperability standards identified in their migration plans and by the end of 2006 ALL systems must meet ALL applicable JTA-A standards. The Army Digitization Office (ADO) (http://www.ado.army.mil) has the lead for monitoring progress toward compliance with the JTA-A.

4.3.5 Software Engineering

Points of contact:
Director of Information Systems for Command, Control, and Communications (DISC4), ATTN: SAIS-IAA-Q, 107 Army Pentagon, Washington, DC 20310-0107
CECOM Software Engineering Center (SEC), ATTN: AMSEL-RD-SE-R-ESD, Bldg. 1210, Ft. Monmouth, NJ 07703

Reference: "RFP Guide," http://www.sed.monmouth.army.mil/strategic/ then select "Acquisition Streamlining" then "RFP Guide."

Army LCSECs are available to support PMs with software engineering expertise for various facets of software acquisition. The Communications and Electronics Command Software Engineering Center (CECOM SEC) has written a document entitled "RFP Guidelines" to provided a description of the software acquisition process, and offers guidance and suggested wording for preparing the Statement Of Work (SOW) and Sections L and M of the Request For Proposal (RFP).

The CECOM SEC has also compiled an in-depth set of questions titled "Army Software Insight Questions to Prepare for Milestone and Program Reviews" for use on Army software-intensive programs. The insight questions support PEO/PM risk management and mitigation, the Army's Chief Information Officer (CIO) Assessment Requirements, and the DoD Program Review matrix questions in Appendix XIII.

The document contains software-oriented questions grouped under seven domains. Each domain is broken is broken up into several Assessment Areas. The domains are Software Technology, Software Acquisition Management, Program Management, Software Process, Software Quality, Test and Evaluation, and Software Support. The detailed Assessment Areas include: Year 2000, Reuse, Program Management, Process Improvement, Commercial Off the Shelf (COTS), Metrics/Management Indicators, Source Selection, etc.

The Assessment Areas provide a comprehensive framework for PEO, PMs, and WIPTs to assess the software "health" of a project and should be used on an ongoing basis and before Milestone Reviews to identify areas needing attention. The questions take into consideration aspects of the Software Engineering Institute's Capability Maturity Model SM (CMMSM), the Software Acquisition Capability Maturity Model (SA-CMM) and the software program managers network (SPMNs) SABPs, as well as other software acquisition and support issues based on CECOM SECs Army Life Cycle Software Engineering (LCSE) expertise. The insight questions are

available from the SEC (http://www.sed.monmouth.army.mil/sit) and the ODISC4 (http://www.army.mil/disc4/acq).

The Software Acquisition Best Practices (SABPs) was initiated by DoD in 1994. This initiative was based on the fact that many effective practices exist for managing software, both in industry and Government. However, their use and understanding was not widespread within DoDs software acquisition programs. Several panels were studying successful software programs in the public and private sectors to determine those practices that were characteristics to all programs as significant leverage items for success. These studies resulted in the guidelines for Software Acquisition Best Practices.

The Software Acquisition Capability Maturity Model (SA-CMM) (under development) is a collaborative work of authors from Government, industry, and the Software Engineering Institute (SEI) of Carnegie Mellon University in Pittsburgh, PA. The SA-CMM is intended to identify a minimum set of actions that, when implemented, will improve the capability of the organization's software acquisition process. It is being developed to provide organizations a road map for implementing software acquisition process improvement. Information regarding the SA-CMM may be obtained from the SEI and from the TACOM LCSEC.

Software Reuse

As the cost and complexity of our software applications increase, it is essential the Army understands and utilizes innovative and efficient software development processes. Software reuse is a recognized software engineering discipline that can result in lower costs, shorter schedules and improved reliability.

To support the implementation of the software reuse initiative, the Army Reuse Center (ARC) offers reuse and technology transition support to Army and other DoD customers concerned about developing and fielding reliable, high-quality, cost-effective systems for today's warfighter. The CECOM Software Engineering Center (SEC), the parent organization of the ARC, is the primary focal point for implementation of software reuse within the Army. The ARCs mission is to develop, implement, maintain, and administer a total reuse program supporting the entire software development life cycle.

The ARC has developed and maintained a full range of products and services geared towards assisting projects of all types and sizes. These reuse services, which focus on critical aspects of any reuse program, include reuse management, reuse education, domain analysis, domain implementation, and the Army Library. For additional information and assistance contact 703-806-4300, or E-mail: arcnews@issc.belvoir.army.mil.

Domain Analysis and Engineering

For software-dependent systems, performance is based upon underlying software capabilities. Specifying the use of common architectures and other software design constraints, as software performance requirements, is an integral part to achieving successful system performance. Using common architectures allows the creation of software components that fit within domain-specific architectures and supports product line approaches. Domain analysis and engineering should be utilized to design, develop, and sustain software items and domain specific software architectures such that they comply with the Defense Information Infrastructure Common Operating Environment (DII COE) and support Army reuse objectives. Transition of noncompliant systems to the DII COE and reengineering to use common architectures should be part of continued product improvement or modernization through spares, in line with Army and DoD requirements.

Programming Languages

The Army's programming language position will be reflected in the JTA-A. The programming language selections should be made in the context of the system and software-engineering factors that influence overall life-cycle cost, risks, code reuse and commercial software integration in conjunction with the specific software requirements of the system or application being developed. When software development is considered (no COTS, or other existing reusable software would satisfy the requirement), specific factors to take into account in the programming language selection process should include:

1. System and software requirements (in other words, performance, reliability, safety, and security),
2. Software development environment,
3. Future adaptability (in other words, extensibility, maintainability, supportability, and portability),
4. Total life-cycle cost, and
5. Compatibility of training devices with system that they support.

Software Capability Evaluations

The source selection authority must weigh the contractor's software development capability. Software developers with demonstrated, mature software engineering capability, with relevant domain experience and

appropriate skill matrix are more likely to be able to perform the required work and do not require the same degree of government oversight as would a software developer that uses less mature processes.

Software Capability Evaluation (SCE) is a proven method for evaluating a contractor's ability to deliver quality software. CECOM SEC and TACOM LCSEC provide SCE services for Army systems or, alternatively, the services of the Consortium (outlined below) may be used. To determine if your program is required to conduct SCEs consult AR 70-1.

CECOM and TACOM perform Software Process Risk Evaluations, Capability Maturity Model-based appraisals that are tailored to Army needs. More information is available from the SEC and LCSEC (http://www.sed.monmouth.army.mil/SEC/) or contact herman@doim6.monmouth.army.mil.

The Army, Navy, and Air Force acquisition centers have formed a Consortium to jointly participate in the management, oversight, and quality control of the SCE Support Services Contracts. The Consortium has support services contracts in place to assist all DoD and other government organizations to conduct SCEs. These contracts have been successfully used by numerous organizations on a variety of programs.

The Air Force's Software Center administers the support contracts and will assist you in determining your requirement for an SCE and initiate a delivery order with an SCE Support Services contractor. Additional information may be obtained by calling 617-377-8561, or at Farinelloj@hanscom.af.mil.

Software Measurement

The purpose of the software measurement is to help management achieve program objectives, identify and track risks, satisfy constraints, and recognize problems early. These management concerns are referred to as issues. DoD 5000.2-R and ODISC4 memo, 13 September 1996, “Acquisition Reform and Software Metrics” require the use of software measures to affect the necessary discipline in software development process and assess the maturity of the software products. Also required that developers address the following management issues using software measures:

1. Schedule and progress regarding work completion,
2. Growth and stability regarding delivery of required capability,
3. Funding and personnel resources regarding the work to be performed,
4. Product quality regarding delivered products,
5. Software development performance regarding the capabilities to meet program needs, and
6. Technical adequacy regarding software reuse, and standard data element usage.

Practical Software Measurement (PSM) Guide has been developed by the Joint Logistics Commander working group for DoD Program Managers to help integrate software measurement into their program management and development processes. This guide is based on actual experience from DoD and industry programs and helps provide a measurement basis for objective communication. The PSM treats measurement as a flexible process, not a predefined set of graphs and reports. The PSM approach tailors measures to address program specific issues and integrate them into the developer's software processes. The PSM approach applies systematic analyses to convert quantitative and qualitative data into information that helps the PMs to make informed decisions. The PSM team is available to help and can provide training, tools, and implementation support. Further information may be obtained from the PSM Support Center, (401) 841-4581, psm@csd.npt.nuwc.navy.mil, or from the Army's Software Metrics Office at (703) 681-3823. Also, OPTEC is available for providing training and guidance on the PSM at 703-681-3895.

Software Working-Level Integrated Product Teams (SW WIPTs)

The SW WIPT is under the purview of the PM. It promotes effective participation by experts in software and system acquisition activities critical to the success of Army software-dependent systems. SW WIPTs focus attention on issues and risks in software acquisition, development, fielding, and support. At the PMs desecration, the Computer Resources Life Cycle Management Plan (CRLCMP) may be used to document SW WIPT results. (A sample CRLCMP is available from the CECOM SEC or via the Internet at www.sed.monmouth.army.mil.)

Ensuring that Army software meets warfighter or sustaining-base needs requires software engineering across the entire system life cycle; acquisition through operation and support. SW WIPTs will:

1. Reduce the likelihood that software acquisition and support strategies, plans, or actions could cause the program to be modified, or even canceled, when reviewed at higher levels.
2. Ensure developed software conforms to the Joint Technical Architecture—Army.
3. Increase the likelihood of producing an acceptable product the first time, on time.

4. Assist in defining software-related exit criteria for milestone decisions and ensuring their satisfaction.

5. Expedite resolution of software problems and risks, and provide software solutions to system problems.

6. Assist the PM in evaluating, prioritizing, and re-scoping software-based capabilities.

7. Define software information and measures essential for project monitoring and operational support.

8. Provide continuous insight (rather than crisis-driven and milestone-driven oversight), and identify/resolve software issues as they arise (elevate issues when necessary).

9. Provide timely analysis/recommendations to facilitate decision-making on software acquisition and support.

10. Assess technology, products, and processes in light of Army initial and long-term requirements, including process improvement and process maturity.

11. Provide insight for management of the software impact on the Acquisition Program Baseline (APB).

SW WIPT members should, at a minimum, include TRADOC or the functional proponent (in other words the user representative), the project or system engineer, and software engineers from the Army Life Cycle Software Engineering Center (LCSEC) within the MACOM. In particular, the LCSEC participants provide strong software development leadership and expertise in both domain and interoperability experience. The LCSECs mission is to provide long-term support. The LCSEC is the only Army organization that can address the full spectrum of software engineering issues:

1. Interoperability, operational doctrine, reuse, business process reengineering, and domain/architectural issues.

2. Software process issues and the impact of deviations from plans or proposed changes to ongoing efforts.

3. Software project management and tracking techniques, including estimating and earned value.

4. Relevant emerging technologies, the state-of-the-practice, and available commercial-off-the-shelf and Government-off-the-self (COTS/GOTS) software.

5. Identifying, assessing, and mitigating software-related technical and management project risks.

6. Managing necessary evolutionary improvement while maintaining interoperability and continuity of operations (CONOPS), and supportability.

7. Providing software input to the Source Selection Plan and Acquisition Requirements Package.

8. Strategies for avoidance of software rework that gets increasingly costly as project progresses.

9. Assessing feasibility of design, produceability, and supportability, as well as software quality.

10. Focused assessment of evolving software requirements and design by software, operational, and support experts.

11. Collaboration to bridge the gap between Army operational experts and developer technical software experts.

12. Cost-effective documentation, technical, and management reviews.

13. Attention to long-term support needs, including rapid reprogramming, resolution of field problems, training, and required computer resources and technical support information/documentation.

14. Shared use of common support facilities, personnel, methods, and technologies across multiple systems, when appropriate (to achieve economies of scale).

The IPT should maintain a technical vigilance, obtaining effective insight by performing joint technical reviews of actual work products and collaborative risk management, in partnership with the contractor, to make certain that the system and software design will meet all of the life cycle requirements. Reviews should cover top level design, and detailed design of critical elements. Where possible, issues should be resolved at the joint technical review, and any outstanding issues and risks should be reported to the PM or discussed further at streamlined joint management reviews.

After contract award, during Phase II development, the IPT performs integrated performance review(s) of the contractor's EMD efforts. These reviews should verify performance requirements compliance of the preliminary system design by using model and simulations, test and experimentation results, and tradeoff analyses. If the integrated performance review reveals program issues or risks, the IPT and the contractor should

utilize a collaborative risk management approach to establish and initiate any rework or redirection of the effort.

Project-level IPTs should be held to ensure those software-related issues is properly considered. DoD 5000.2 -R and the DoD "Rules of the Road" guidance indicate that, "IPTs are composed of representatives from all appropriate functional disciplines working together to build successful programs." Software is a major element in the performance of the system, as well as a major contributor to project risk. At the project level, the LCSE expert provides key software engineering disciplines for the success of any software-dependent project.

Software Maintenance and Support

As part of the overall system acquisition program, software maintenance and support requirements need special considerations and integration with all other concerns. LCSECs can provide the expertise and insight to address software maintenance and support concerns to include: making system designs conducive to cost-effective software technical and logistic field support; software maintenance, test and simulation resources and personnel trained to fulfill established requirements; and the training resources to transfer system operational expertise to users in the field.

4.3.6 Reliability, Maintainability and Availability

Point of Contact: Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 103 Army Pentagon, ATTN: SAAL-DE, Washington, DC 20310-0103

References:
MIL-STD 810E, "Environmental Test Methods and Engineering Guidelines."
MIL-HDBK 189, "Reliability Growth Management."
AR 71-3, "Test and Evaluation Policy."
AR 71-9, "Materiel Requirements."
Title 10, U.S. Code, Section 2399.

Availability is a readiness parameter that reflects the status of a system over an extended period of time. Normally, it is most sensitive to the responsiveness of the logistics support system and the system's OPTEMPO. As a result, the DoD 5000.2 R mandatory ORD format includes availability in the Readiness section. System reliability and maintainability, on the other hand, are affected most by the system design and the levels of functionality required during a typical scenario (for example, 24 hour, 96 hour or 30 day mission). The DoD 5000.2 R mandatory ORD format includes mission reliability in the Systems Performance section. Because the MATDEV has such a principle role in the factors that dominate Reliability and Maintainability and such limited control over the factors that dominate availability, this section is focused on R&M. In recognition of this, both AR 71-9 and AR 70-1 specifically address Reliability and Maintainability (R&M) and not RAM.

This section contains background material on R&M requirements and procedural guidance for managing the development and production of Army materiel systems to meet these requirements. It applies to all active Army elements having responsibility for the development, acquisition, and support of Army materiel. This section covers R&M Requirements, R&M Management, R&M Engineering and Design, R&M Testing, and R&M and Assessment Integrated Process Team (IPT) procedures.

R&M Requirements

ORD R&M requirements are developed in accordance with AR 71-9. The R&M requirements section is provided as background only. The Combat Developer (CBTDEV) or Training Developer (TNGDEV) develops the ORD and hence the ORD R&M Requirements. The CBTDEV first determines whether quantitative operational R&M requirements are appropriate and applicable for each development, Commercial and Non-Developmental Item (CaNDI) and modification program (in other words, if quantitative operational R&M requirements will be included in the ORD). The CBTDEVs analysis/rationale for not including R&M requirements in the ORD should be documented and retained for audit purposes. When the CBTDEV determines R&M requirements are applicable and appropriate to a program, these requirements are developed like all other ORD requirements; using the ICT/IPT process. The ORD R&M requirements provide the CBTDEVs best estimate of what is required to meet the user's effectiveness, suitability, and survivability needs but should also reflect what the MATDEV deems affordable and technically achievable within program funding, risk, and time constraints.

Three elements are required for the CBTDEV to define R&M requirements. They are:

1. The parameters and their numerical values. These are reflected in the ORD with their supporting rationale. To provide an audit trail, the CBTDEV documents the R&M Analysis supporting the ORD R&M requirements.

2. The Operational Mode Summary/Mission Profiles (OMS/MP). This is provided as a supporting document to the ORD. It describes for both wartime and peacetime, the individual missions and mix thereof, which the system is required to perform and the conditions (climate, terrain, battlefield environment, etc.) under which the missions are to be performed.

3. A Failure Definition and Scoring Criteria (FDSC). The FDSC defines the required functionality and allowable levels of degradation (in other words, what constitutes a reliability failure) and establishes a framework for classifying and charging test incidents. FDSCs should not use partial failures or criticality factors. The FDSC is a living document that may mature as the program progresses and the system configuration and operation evolves.

A change to any of these elements is a change to the basic requirement and requires appropriate coordination and approval.

R&M Management

The MATDEV is responsible for establishing and overseeing contracts that result in reliable and maintainable systems. The MATDEV should keep all applicable R&M organizations informed of program activities.

The MATDEV should assess the potential impact of R&M on O&S cost and the comparative risk associated with the various alternative concepts to achieve R&M requirements. Reliability Centered Maintenance (RCM) techniques are recommended to coordinate maintainability design efforts with maintenance planning. Acquisition and program planning should include early investment in R&M engineering tasks to avoid later cost and/or schedule delays.

R&M planning should encompass R&M program requirements, program tasks, reliability growth expectations, contract provisions, test plans and resources necessary to support these plans. The MATDEV should keep the status of R&M development visible throughout the program and should plan for contractor reviews; data collection; failure reporting, analysis, and corrective actions; failure review boards; testing and feedback mechanisms as necessary to provide insight into design, development and supportability progress, surveillance and control.

The MATDEV should derive technical reliability thresholds and objectives from the operational requirements. These technical requirements should normally reflect only the hardware and software associated with the CFE and GFE and are used as the minimum acceptable reliability values in the contract. Both the expected shelf life of the system and the shelf life environment should be accounted for in requirements for design life. Because technical reliability requirements are often used as the basis for test planning, the MATDEV should establish the technical objectives sufficiently greater than the technical threshold to preclude unnecessary escalation of test costs. Before contracts are finalized, the MATDEV should coordinate contract R&M requirements with the CBTDEV, matrix support elements and independent evaluators. Both technical and operational R&M requirements are to be demonstrated with high statistical confidence. High confidence is usually considered to be the 80% level; however, tailoring based on test cost or mission criticality is encouraged and the chosen confidence/risk value should be reflected in the Test and Evaluation Master Plan (TEMP).

The MATDEV should ensure that source selection evaluation factors balance R&M, development and production costs, schedule, technical performance, supportability, O&S cost and other principal factors in order to ensure that the fielded system provides the best value response to the established need. Integral to the solicitation process, the MATDEV should consider the following R&M factors:

1. The design approach to achieve R&M requirements.
2. Commitment to continuous process improvement.
3. Responsiveness to R&M tasks and reliability growth plans.
4. Proposed risk reduction techniques.
5. Responsiveness to R&M/O&S cost warranties.
6. Contractor past performance in designing and producing reliable and easily maintainable systems.
7. Proposed innovative design features that enhance R&M.
8. Proposed methods for identifying failure mechanisms/modes.

9. Proposed stress analyses (vibration/shock, temperature, humidity, and voltage).

10. Environmental stress screening.

Solicitations and contracts should provide the MATDEV with adequate visibility into system development to assure that systems are designed to meet R&M requirements, that R&M performance can be effectively tested and that compliance with requirements can be evaluated. When establishing system specifications for contracting purposes, the MATDEV may establish separate requirements for critical functions or for subsystems which are high-risk, safety critical, or which have a high repair/ replacement cost. In design contracts, the MATDEV should encourage early investment in robust design, physics of failure, manufacturing and quality, as these activities can have a positive impact on end product reliability. In production contracts, the MATDEV should encourage the use of statistical process controls and other variability reduction techniques on processes, operations, parameters and characteristics that are critical, special or major.

The MATDEV should coordinate with the contractor to ensure appropriate consideration is given to the following factors in program planing:

1. Failure modes, effects and criticality analysis (FMECA).

2. A Test, Analyze and Fix (TAAF) process.

3. Use of IPTs to independently assess and monitor the growth process.

4. System level testing to confirm achievement of interim and final RAM requirements.

5. A closed loop, Failure Reporting/Analysis and Corrective Action System (FRACAS).

6. Accelerated growth testing—testing at stress conditions higher than normal to precipitate failures at a faster rate.

Reliability growth methodology, MIL-HDBK-189, provides an effective tool for planning and evaluating system reliability and an effective baseline against which actual growth can be managed. The MATDEV is encouraged to apply reliability growth management methodology on all programs at the system level and, whenever practical, at the subsystem and major component level.

1. The MATDEV should ensure development of reliability growth planning immediately following MS I. Reliability growth plans are provided to the independent evaluator for review and comment. These plans should be applied and updated throughout Program Definition and Risk Reduction (PDRR), Engineering and Manufacturing Development (EMD), and Production. Planning for and execution of reliability growth improvement efforts should cease only when the production status or system R&M performance dictates that such efforts no longer have the potential to cost effectively improve system R&M performance or reduce system O&S cost.

2. Whenever possible, system reliability growth curves should be developed based on realistic growth rates for similar systems and should support demonstration of reliability parameters with high confidence. These curves can be based on subsystem as well as system level test data. Intermediate program thresholds and objectives should also be developed from these curves and used to measure progress in meeting reliability requirements.

3. The MATDEV should schedule test time and resources to achieve reliability growth and to validate the correction of deficiencies and defects found during testing. Programs should plan to demonstrate the User Need with high statistical confidence in test, by the time of the Milestone (MS) III decision.

To the maximum degree possible, the MATDEV should ensure the correction of the underlying causes of test incidents. This includes:

1. Coordinating with an appropriate agent to correct or minimize the impact of problems that do not fall under the MATDEVs responsibility. Coordination can be with an appropriate interoperable system PM when the problem cannot be completely resolved within the MATDEVs own span of control; with CBTDEVs for changes to tactics, doctrine and system operating procedures; with testers for problems caused by inappropriate test conditions; and with other agents as appropriate.

2. Validating the acceptability of the corrective action. The MATDEV, in coordination with the independent evaluator, should plan for that re-testing necessary to fully validate the effectiveness of corrective actions and should provide those results to the R&M Assessment IPT and/or the Corrective Action Review Team.

3. Hosting a Corrective Action Review Team (CART). The purpose of the CART is to determine adequacy and effectiveness of planned and implemented corrective actions. The CART is usually composed of the same members as the R&M IPT and held just prior to the Assessment IPT. The results of the CART are used by the Assessment IPT to develop estimates of projected system R&M characteristics and compare to the system's R&M requirements.

When appropriate and in accordance with AR 70-1, the MATDEV should establish overhaul schedules and procedures to restore equipment reliability to required levels and to extend a system's useful life. Overhauls should be conducted based on Reliability Centered Maintenance (RCM) concepts and methods. The MATDEV should include reliability provisions in revisions to existing overhaul standards and depot maintenance work requirements and should implement an assessment program to measure the performance of the overhauled equipment by utilizing data from field tests or routine exercises.

The MATDEV should continuously assess the performance of developed and fielded systems to identify opportunities for system R&M improvements, either through capability enhancement or through support burden and O&S cost reduction. When opportunities for improvement are found, the MATDEV should utilize Value Engineering or other appropriate tools to incorporate the improvement.

Throughout the materiel life cycle, the MATDEV should maintain a historical audit trail of R&M development that should include, but not be limited to:

1. R&M requirements, to include the FDSC and OMS/MP.
2. R&M planning documentation, current and historical growth curves, and contractual R&M provisions.
3. Test data (to include type of test, system configuration, test conditions, test length, failures, data analysis, problems, root-cause failure analysis, and corrective actions).
4. R&M status at key points in Development, Production and field operation.
5. R&M improvements.

R&M Engineering and Design

The MATDEV should address R&M as an integral part of system reviews and audits. Reviews should utilize a systems engineering approach and include all disciplines that have an impact on performance and supportability (including Army depot and field maintenance personnel) during the life cycle. The review objectives should be to:

1. Determine achievement of intermediate reliability growth thresholds.
2. Bring management attention to identified deficiencies.
3. Manage improvement actions.
4. Determine if tasks are being accomplished as scheduled.

Physics of Failure (PoF) is a proactive approach for designing reliability into a system. Although currently applicable principally to electronic component designs, PoF methodology model failure mechanisms, design alternatives and environmental stresses to give designers insight into how, where and under what condition products are expected to fail. The PoF design methodology establishes a scientific basis for evaluating the reliability of alternative materials, structures, and electronic technologies and allows designers to identify and overcome potential design imperfections early. Effective application of PoF methodology may:

1. Reduce the need for reliability testing by achieving higher design reliability.
2. Reduce the need for costly fixes and upgrades.
3. Reduce system operation and support costs.
4. Allow for more effective fixes and maintenance actions when failures do occur, due to the increased knowledge of inherent failure mechanisms.

The MATDEV should actively solicit the use of PoF methodologies in design and development.

Design maturity is an objective in each development program. For early design maturity, MATDEVs should encourage use of:

1. Computer-aided R&M design (for example, vibration/thermal analysis, failure mechanism analysis), optimization and simulation programs when feasible.
2. Component level R&M testing (hardware and software) well before integration into system prototypes, early system level R&M testing, and accelerated life testing. The MATDEV should fund for test items (components through systems) and operating time throughout the acquisition process.
3. Analyses of root cause failure mechanisms during development. Maximum use should be made of computer design tools available for this purpose.

The MATDEV should assure systems are designed so R&M requirements can be effectively tested and evaluated. This requires up-front planning to:

1. Create the technical and realistic operational environments necessary to exercise the system fully.

2. Detect failures of the system to accomplish its intended mission.

3. Collect adequate failure data to support fault diagnosis and corrective action.

When practical, the MATDEV (in coordination with Government test activities) should consider the requirement for system designs to include integral test and data collection capabilities. These capabilities are in addition to the built in test (BIT) capabilities provided in support of system maintenance and include the spectrum of stimulators, data loading devices, data collection devices, detectors, and other means to create the necessary environments and collect the resulting data. System development and test & evaluation personnel determine whether to purchase or develop targets, large-scale instrumentation systems and surrogate interoperability systems. Both the developmental and operational test communities should be an integral part of this planning. Before use in system level government tests, the MATDEV should validate that drivers, stimulators and other instrumentation are fully functional and compatible with the system.

When TDPs are to be procured by the Government, the MATDEV should ensure R&M requirements are integrated into the TDP prior to production. This should include system-level and critical lower-level work breakdown structure elements (see MIL-STD-881), along with related requirements, screening profiles and tests. These requirements and tests should be in sufficient detail to ensure that products satisfy R&M requirements and quality assurance provisions.

R&M Testing

The purpose of R&M testing is to ensure an effective assessment of system R&M performance in accordance with the FDSC and OMS/MP. See AR 73-1 and DA Pamphlet 73-1 for detailed R&M test and evaluation guidance.

Testing outlined in the TEMP is used to determine progress toward achieving R&M requirements. Operational and developmental testing to support estimation of R&M performance against requirements should replicate the field environment to the degree feasible. System and software functions should be exercised to the levels and in the proportions described in the OMS/MP. System Evaluation Plans are written by the Independent Evaluator and should be staffed with the system IPT members. Unless specifically excluded in the approved program documentation, assessment of R&M performance in accordance with the FDSC should be an objective in every system level test (technical, operational and production). The R&M IPT should score any data used for evaluation of R&M performance against requirements.

Tests should be designed to be of such length that system reliability requirements can be demonstrated with high statistical confidence. Systems reliability growth requirements should also be a consideration when determining test length. Trade-off analyses should be performed to allow for the accumulation of the maximum number of total operating hours during the test window, and ensure that a sufficient number of hours are accumulated on each test unit.

1. Field and chamber test conditions should represent, to the maximum degree possible, all conditions that are anticipated in the field wartime environment.

2. Free and timely exchange of R&M data within government agencies is encouraged in order to make maximum value of collected data.

R&M Integrated Process Teams

The purpose of a R&M IPT is to review, classify and charge R&M data from system level development and operational tests. All data from system level R&M testing which record degradation from anticipated system performance should be scored in accordance with the FDSC. Participation at a R&M IPT should not constrain the independent assessment of test data. Its objective is to ensure there is a full understanding of the data and the circumstances surrounding its generation, and to ensure there is a clear audit between and among the independent estimates of R&M performance.

The principal R&M IPT participants are the MATDEV, CBTDEV, TNGDEV, and independent evaluator. The tester (developmental or operational as applicable) should attend in an advisory capacity. The independent evaluator annotates in the TEMP those tests for which he will serve as chair for R&M IPT conferences. The MATDEV chairs all other R&M IPTs not designated by the independent evaluator. The chair to the R&M IPT is responsible for:

1. Administrative requirements including arrangements for meetings, distribution of R&M IPT data, and preparation of R&M IPT minutes.

2. Conduct of the meeting in accordance with established procedures.

Prior to the first R&M IPT, it is recommended that the chairperson coordinate with participating organizations to:

1. Establish the membership and the format of the R&M IPT.

2. Review and establish a common understanding of system requirements and the FDSC.

3. Identify a single voting member from each principal organization, with authority to speak for that agency.

R&M IPTs should be held periodically during system level testing. A final R&M IPT should be held at the conclusion of each test. When possible, R&M IPT proceedings should be conducted via electronic means (in other words, e-mail, teleconference, and video teleconference) vice face to face meetings. For a R&M IPT to be official, at least two of the principal R&M IPT participants should be represented or should submit scores to the chair, and decisions should be through majority vote of the designated principal R&M IPT participants spokespersons. In cases where no majority opinion exists, the independent evaluator will make the final determination of incident scoring (categorization/chargeability). Differing opinions should be documented in the minutes. At least 2 weeks before each R&M IPT, the chair should distribute all incident reports and maintenance summaries to the IPT members.

All test incidents should be scored using the approved FDSC. Scoring should take into account deviations from the OMS/MP or test conduct atypical of that expected in the field. Test incident reports should provide the necessary information for the R&M IPT to charge and classify the R&M merits of the incident. However, the tester should provide additional explanations and background information (for example test conditions, maintenance actions, failure analysis, etc.) as needed by the principal R&M IPT participants to score incidents.

By law (section 2399, title 10, United States Code), system contractor personnel will not attend or be directly involved as members or observers in any R&M IPT or assessment IPT (see the Assessment IPT section below) which address data intended to support evaluation (or assessment) of their system's operational R&M parameters. Discussions with system contractor personnel should be held separate from scoring and assessment activities and the IPT chairperson should maintain a written record of the nature of these contractor/government discussions.

Assessment Integrated Process Teams

The purpose of a R&M Assessment IPT is to establish a final R&M database from which assessment of operational and technical R&M requirements and specifications will be made. In establishing that data base, the Assessment IPT determines the viability of aggregating individual test data bases and determines the impact of validated corrective actions on that data. The Assessment IPT is also encouraged to estimate the operational R&M performance using the established database. A R&M Assessment IPT should be held at the completion of a major acquisition phase or before a major program decision.

Assessment IPTs should be conducted under the same guidelines as R&M IPTs and should have the same membership. The Independent Evaluator chairs the Assessment IPT. The chair of the Assessment IPT makes the final scoring determination when no majority opinion exists. At the start of the Assessment IPT, the chairperson should coordinate with participating organizations to establish the spokespersons, attendees and the format of the Assessment IPT; review and establish a common understanding of system requirements and FDSC; review the methodologies for developing R&M estimates; and establish procedures for the corrective action process. The contractor restrictions described above also apply to Assessment IPTs.

A test conducted in accordance with the OMS/MP using production representative systems should eliminate the need for data partitioning. However, the Assessment IPT should review equipment configurations, test profiles and results achieved to determine whether there is any need to partition the data in order to provide a valid estimate of system parameters. Reliability growth tracking techniques are recommended for use in assessing the demonstrated reliability of tested systems and should address both software and hardware. Reliability growth tracking techniques provide the most rigorous and objective method for assessing the impact of configuration changes to the tested system.

When developmental and operational testing are conducted in accordance with the OMS/MP, the Assessment IPT should aggregate the data unless results indicate significantly different R&M performance or specific circumstances make aggregation inadvisable (e.g., significantly different system configurations were used, results from one test differed significantly from those of another). When data can not be aggregated, the Assessment IPT should develop R&M parameter estimates based on the most representative set of data for which there is an adequate sample size.

In order to determine the impact of fixes on the estimates of R&M parameters, the Assessment IPT should determine the likelihood of future occurrence of each failure mode. A failure mode can be considered eliminated or no longer assessable against a R&M requirement if the corrective action is supported by:

1. A complete failure analysis,
2. Demonstration of the effectiveness of the corrective action in test, and
3. Verification of future implementation of the corrective action.

Failure modes should be eliminated during the Assessment IPT only when there is concrete evidence that a failure mode should not recur in the operational environment and the fix does not create any new failure modes. If the failure rate of a particular mode has been reduced but not eliminated by a validated fix, the failure rate observed after the change should be prorated for the entire test length. Only fixes that have been verified as effective in test should be used to reduce the number of relevant failures. Use of a Corrective Action Review Team (CART) is recommended to gain a comprehensive and as uniform understanding as possible of the effectiveness of implemented corrective actions.

In the event there are significant differences among the spokespersons, the unresolved differences should be reported to decision reviews. The results of the R&M Assessment IPT should be:

1. Evaluated against operational R&M requirements established in the ORD.
2. Portrayed in System Evaluation Report.
3. Used to support the Army Systems Acquisition Review Council (ASARC) and In-Process Review (IPR) decision processes (AR 70-1), and the Materiel Release process (AR 700-142). Estimates of R&M parameters which deviate from those of the Assessment IPT may be presented, but should be accompanied by the Assessment IPT estimates and rationale for the deviation. Deviations from the agreed upon categorizations or demonstrated estimates should be clearly identified to provide a well-established audit trail.

4.3.7 Environment, Safety, and Health (This section combines information pertinent to paragraphs 4.3.7.1 through 4.3.7.5 of DoD 5000.2-R.)

Points of contact:

Environmental analysis.

The following organizations are listed by environmental function and may be contacted directly to provide matrix support and/or assistance to system acquisition programs:

1. Policy/Guidance (Acquisition)—Commander, U.S. Army Materiel Command, ATTN: AMCRDA-TE-E/SAAL-ZCS-E (Army Acquisition Pollution Prevention Support Office), 5001 Eisenhower Avenue, Alexandria, VA 22333-0001.
2. Policy/Guidance (Installations/Facilities)—Deputy Assistant Secretary of the Army (Environment, Safety, and Occupational Health), ATTN: SAIE-ESO, 110 Army Pentagon, Washington, DC 20310-0110
3. Requirements (Installations/Facilities)—Director of Environmental Programs, Assistant Chief of Staff Installation Management, HQDA, ATTN: DAIM-DEP, Washington, DC 20310-0600.
4. Supply/Maintenance Logistics/ILS—Commander, U.S. Army Materiel Command, ATTN: AMCLG-E, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001.
5. Medical—Commander, U.S. Army Materiel Command, ATTN: AMCSG-S, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001.
6. Industrial—Commander, U.S. Army Industrial Operations Command, ATTN: AMSIO-EQC, Rock Island Arsenal, IL 61299-6000
7. Training (Acquisition)—Commander, U.S. Army Materiel Command, ATTN: AMCRDA-TE-E/SAAL-ZCS-E (Army Acquisition Pollution Prevention Support Office), 5001 Eisenhower Avenue, Alexandria, VA 22333-0001.
8. Training (Installation/Facilities)—Commander, U.S. Army Environmental Center, ATTN: ENAEC-EC, Aberdeen Proving Ground, MD 21010-5401.
9. Installation Pollution Control—Commander, Construction Engineering Research Laboratory, Environmental Division, P. O. Box 4005, Champaign, IL 61820.
10. National Environmental Policy Act/Installations and Facilities (Environmental Analysis/Quality)—Commander, U.S. Army Materiel Command, ATTN: AMCEN-A, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001.
11. Environmental Law—Commander, U.S. Army Materiel Command, ATTN: AMCCC-G, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001.
12. Environmental Hygiene/Noise—Commander, U.S. Army Center for Health Promotion and Preventive Medicine, ATTN: MCHB-DC-EEN, Aberdeen Proving Ground, MD 21020-5422.

13. Safety—Commander, U.S. Army Safety Center, ATTN: CSSC-SPI, Fort Rucker, AL 36362-5363.
14. CFC/Halons—Commander, U.S. Army Materiel Command, ATTN: AMCRDA-TE-E/SAAL-ZCS-E (Army Acquisition Pollution Prevention Support Office), 5001 Eisenhower Avenue, Alexandria, VA 22333-0001.

System safety.

HQDA, ATTN: DACS-SF, 200 Army Pentagon, Washington, DC 20301-0103

Health hazards.

Commander, U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM), 5158 Blackhawk Road, ATTN: MCHB-TS-OHH, Aberdeen Proving Ground, MD 21010-5422

Toxicity clearances.

Commander, U.S. Army Center for Health Promotion and Preventive Medicine, 5158 Blackhawk Road, ATTN: MCHB-TS-TTE, Aberdeen Proving Ground, MD 21010-5422

References:

Title 42, United States Code, Section 4321-4370d, "National Environmental Policy Act"
Title 40, Code of Federal Regulations, Parts 1500-1508, "National Environmental Policy Act Regulations."
Executive Order 12114, "Environmental Effects Abroad of Major Federal Actions."
Executive Order 11514, "Protection and Enhancement of Environmental Quality."
Executive Order 12856, "Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements."
Executive Order 12873, "Federal Acquisition, Recycling, and Waste Prevention."
Executive Order 12196, "Occupational Safety and Health Programs for Federal Employees."
DoD Instruction 4715.9, "Environmental Planning and Analysis."
DOD Directive 4210.15, "Hazardous Material Pollution Prevention."
DOD Instruction 6050.5, "DoD Hazard Communication Program."
DOD Directive 3150.2, "DoD Nuclear Weapon System Safety Program."
DOD Directive 6050.9, "Chlorofluorocarbons (CFCs) and Halons."
DOD Directive 6055.9, "DOD Explosives Safety Board (DDESB) and DoD Component Explosives Safety Responsibilities."
DOD Directive 6050.1, "Environmental Effects in the United States of DOD Actions."
DoD Instruction 4715.4, "Pollution Prevention."
DoD Instruction 6055.1, "DoD Occupational Safety and Health Program (Changes 1&2)."
MIL-STD-882C, "System Safety Program Requirements."
AR 200-1, "Environmental Protection and Enhancement."
AR 200-2, "Environmental Effects of Army Actions."
AR 40-5, "Preventive Medicine."
AR 40-10, "Health Hazard Assessment Program in Support of the Army Materiel Acquisition Decision Process."
AR 385-16, "Systems Safety Engineering and Management."
AR 602-2, "Manpower and Personnel Integration (MANPRINT) in the System Acquisition Process."
Managing the Environmental Risk: Applying the Environmental Analysis Process of the National Environmental Policy Act to Weapon System Acquisition Programs, June 1996.
Headquarters, Army Material Command, "Materiel Developer's Guide for Pollution Prevention," December 9, 1994
EIA Engineering Standard, IS-632.

Environment, Safety, and Health

To support decision making by the materiel developer or other Acquisition Officials the following supplies essential information and procedures to implement DoD and DA policy and guidance for Environment, Safety and Health (ESH) requirements during materiel acquisition. The DoD Defense Acquisition Deskbook (DAD) contains specific recommendations about environmental, system safety, health hazard analyses (including toxicity clearances). DoD policy requires that all programs, regardless of acquisition category comply with the

requirements for environmental, safety and health analysis. The Points of Contact list above provides several sources of assistance.

ESH Documentation

The materiel developer's strategy for managing ESH issues is defined in a programmatic “environmental, safety and health evaluation” which is an element of the Acquisition Strategy. The use of the word “evaluation “ is unfortunate and misleading in that the programmatic ESH evaluation is merely the title of the materiel developer's strategy for identifying the requirements, and establishing the organization, responsibilities, milestones and budget estimates needed to “evaluate” the impact of environmental, safety and health issues. The programmatic ESH evaluation is NOT a NEPA document. It is a management tool that helps ensure that program managers meet the requirement of DoD 5000.2-R, Part 3, section 3.3.7. The ESH evaluation should be an integral part of the Acquisition Strategy as opposed to a separate document.

Environment, Safety and Health Analyses

The programmatic ESH evaluation should layout the plans, programs, and budgets to accomplish analyses to support decisions made about the weapon system. All the following areas require ESH analyses, and three of the areas require “programs”. A single ESH program should be established (as opposed to three separate ones) with NEPA being the driver for the engineering and scientific analyses required to mitigate environmental impacts and establishing pollution prevention. Hazardous material management should be a subset of pollution prevention. System safety and health hazard analysis should be a mutually supporting adjunct to environmental/pollution prevention analyses and hazardous materials management:

Consideration and analysis of the environmental consequences of the program and each action are required prior to decision making. In some cases where an action may have an environmental impact, NEPA analyses (including comment by expert agencies and public participation) must be completed and documented prior to decision making. The process for accomplishing the NEPA analysis, the format for reporting the results of the NEPA analysis, the authority for approving NEPA documents and the action of reporting decisions reached as a result of the NEPA analysis are mandatory. The deskbook and the references contain detailed instructions for acquisition managers regarding NEPA.

Periodic analyses of environmental laws to assure compliance and to determine the impact of the law (and proposed changes) on program cost, schedule and milestones are required. All acquisition programs are required to comply with legally applicable and appropriate federal, state, interstate, and local environmental codes, standards and regulations.

Safety and Health Hazards Analyses supporting a System Safety and Health Program that identifies, corrects, and manages safety and health risks are mandatory. See System Safety Analyses and Health Hazard Assessments below.

Analyses supporting Hazardous Materials Management, which include a description of the program, goals and issues, including the process for identifying, eliminating or minimizing use, tracking, storing, handling, treating and disposing of hazardous materials by contract vendors are mandatory.

Pollution prevention analyses to identify opportunities to eliminate or reduce waste discharges or emissions to air, land or water; RDT&E necessary for introducing new technologies; studies of the impact of the program on natural resources; and assessments of the cost effectiveness of using recovered and/or recycled materials and environmentally preferable materials, chemicals and processes are mandatory.

These analyses are not mutually exclusive activities and they need to be coordinated. Integrated product and process teams (IPTs) should consider environmental quality considerations with safety and health issues and other issues that affect program decisions. Each analytical area uses different tools and each presents a different set of concerns to evaluate in decision making. Environmental, safety and health issues represent potential risk to acquisition programs. These risks must be understood and managed like other issues affecting the program.

System Safety

PEOs are designated as the safety officer for their systems. The PEOs in turn, rely heavily on their PMs to fully integrate their system safety programs into their developing systems. The PMs will need to tailor their System Safety Integrated Product Teams (SSIPT) to meet the requirements based on the acquisition category (major or minor).

A complete discussion intended to provide PEOs, PMs, CBTDEVs, MATDEVs, trainers, testers, independent evaluators, and system safety engineers with the information necessary to develop, initiate, and effectively manage their system safety program is contained in the DAD—Fundamentals of System Safety

Management. It is intended to provide users, to include commanders at all levels, with information on how system safety programs can be carried out to enhance their force protection mission. The following information helps guide system design, training, or use for current systems and future system development:

1. Risk Management Process. Risk Management is the five (5) step process (in other words, identify hazards, assess hazards, develop controls and make risk decisions, implement controls, and supervise and evaluate) the Army uses to minimize system hazards while managing affordability and system effectiveness.

2. System Safety Risk Assessment (SSRA). Guidance is provided for independent documentation, preparation, and documentation of the stand alone SSRA. The SSRA builds the audit trail to document the risk coordination, concurrence/non-concurrence, and final risk decision.

3. Hazard Tracking System (HTS). The HTS supports risk management by capturing hazards and providing a communication forum. Additionally, it provides hazard close-out methods and criteria within the functional steps of the safety risk management process. A key component of the HTS is the Hazard Tracking List (HTL). Once a real or potential hazard is identified, it is formally considered and tracked in the HTL. The closure of a hazard does not eliminate the requirement to retain the hazard in the HTL. The HTL is retained throughout the life cycle of the system.

4. CaNDI Market Survey. Provides basic system safety questions that should be included in any CaNDI market investigation/survey.

5. Independent Safety Assessment (ISA) Format. The ISA is the formal document used to communicate the system safety program status and any significant hazards to the materiel decision authority during MADP review. The ISA consists of two elements. First, a transmittal letter signed by the USASC Commander (for major materiel acquisition programs) or the MACOM (or equivalent) Commander providing matrix safety support (for IT OIPT and non-major materiel acquisition programs) that summarizes the ISA. The second element is a technical report prepared by the safety office overseeing the program.

6. System Safety Integrated Product Team (SSIPT) Charter. Provides an example of a System Safety Integrated Product Team Charter.

7. Safety Release for Testing Preparation Guide. Provides an example of a Safety Release for Testing.

Health Hazard Assessments

Health hazard assessments (HHAs) are required throughout acquisition life cycle, including modifications, advance technology transition demonstration programs, and programs for both developmental and non-developmental items. The primary mechanism for accomplishing an HHA is the HHA Report (HHAR) (see the DAD). The HHAR provides a standard structure and approach for assessing system-generated threats to the health of soldiers and DoD personnel. HHARs provide MATDEVs/CBTDEVs health hazard assessment data requirements and guidance on methods to mitigate system-specific health hazards. In addition, HHARs support preparation of MANPRINT Assessments, System MANPRINT Management Plan (SMMP), Test and Evaluation Master Plans (TEMPs), Market Investigations (MIs), safety releases, program management documentation and system doctrinal, technical and training publications.

Toxicity Clearances

A Toxicity Clearance is a formal approval procedure to use a new material or chemical in the military system based on health implications. This approval is required for new chemicals and materials entered into the Army Acquisition System if not addressed in a Health Hazard Assessment. This does not replace but is in conjunction with the OSHA requirements for Hazardous Communications in 29 CFR 1910.1200. The procedure to request and the information required to perform a Toxicity Clearance are found in AR 40-5. The Toxicity Clearance process can be accomplished in a timely manner through a verification of a completed Material Safety Data Sheet with appropriate confirming documentation.

CBTDEV/MATDEV provide reimbursement for all onsite HHA support and medical research related to materiel and operational specific military unique health effects. Work requested from commands other than USACHPPM requires reimbursement (for example, whole body vibrations, non-auditory blast overpressure, and some climatic injury modeling).

Procedures

Environmental Analysis procedures are addressed in the DAD.

System safety procedures are addressed in the DAD.

Health Hazard Assessment procedures including the procedures for requesting toxicity clearances are addressed in the DAD.

4.3.8 Human Systems Integration (HSI)

Point of Contact: HQDA, ODCSPER, 300 Army Pentagon, ATTN: DAPE-MR, Washington, DC 20310-0300

4.3.8.1 Manpower and Personnel Integration (MANPRINT) (This paragraph is not present in DoD 5000.2-R.)

Point of Contact is the same as paragraph 4.3.8.

References:

AR 602-2 “Manpower and Personnel Integration (MANPRINT) in the System Acquisition Process.”

Handbook for MANPRINT in Acquisition, A “How-To Guide”, July 1997.

MANPRINT is the Army's implementation of DoDs HSI Program in accordance with DoD 5000.2, part 4, and must be executed to achieve the objectives of DoDD 5000.1. This section briefly discusses and describes fundamental procedures for implementing MANPRINT. A detailed description of MANPRINT program scope, objectives, and organizational responsibilities are contained in AR 602-2.

MANPRINT is a comprehensive management program and a technical integration process that satisfies OSD HSI requirements. MANPRINT systematically integrates the activities and products of seven existing domains: manpower, personnel, training, human factors engineering, system safety, soldier survivability, and health hazards.

The MANPRINT process (a) identifies issues and constraints from the seven MANPRINT domains and (b) actively manages the integration of these human performance and reliability considerations into the materiel acquisition and development processes. As an umbrella concept, MANPRINT not only enhances integration among its domains but also integrates these domains with relevant design activities in the traditional areas of maintenance, logistics, and support. Further, MANPRINT technical information plays a prominent role in guiding acquisition decisions from concepts and studies approval through deployment.

MANPRINT recognizes that every system requires multiple design trade-off decisions among its many dimensions (for example, allocation of functions to hardware, computer software or soldier, system purchase cost, maintenance and repair costs, maintainer and operator training costs, level of risk for issues in safety, health hazards and survivability, etc.). When equipment is designed and built right the first time, costly retrofits and materiel changes or repairs can be reduced or eliminated. Additionally, if new equipment is easier to operate and maintain, the operation and support (O&S) costs are reduced and system performance is enhanced. As a result, Army's cost of ownership is reduced, while total system performance is increased.

MANPRINT recognizes that the capabilities and limitations of the individuals who operate, maintain, repair, and support Army equipment is an important consideration when designing or selecting hardware and/or software. The MANPRINT process seeks to optimize total system performance and increase the Army's warfighting capability. From a MANPRINT perspective, a total system includes the equipment hardware and software, trained operators and maintainers, embedded training capabilities/options, training devices, plus the environment in which the system must operate.

The MANPRINT process refers to those procedures that are accomplished to ensure that soldier performance issues (in other words, for leaders, operators, maintainers and support personnel) are identified, addressed, and managed throughout the design, development, and acquisition of a materiel system. These procedures also apply to alternative acquisition strategies and to modifications. Consider MANPRINT just as important as cost, schedule, performance, and supportability.

The proponent or CBTDEV initiates and manages the Integrated Concept Team (ICT). A MANPRINT representative is on the ICT and assists in developing the requirements documents (MNS and ORDs). The ICT determines the level of MANPRINT involvement for each system. Perhaps the group's most critical role is communication. The group ensures those identified issues and concerns are communicated to other acquisition organizations and are included in requirements and program documents. The Army Research Lab Human Research and Engineering Directorate (ARL-HRED) participants in all ICTs until it becomes clear that there is no further need, and works to ensure essential coverage by the other MANPRINT domains. ARL-HRED informs the ICT leader and the Director of the Army's MANPRINT Program when they determine that MANPRINT coverage is inadequate or there are issues that need to be resolved.

MANPRINT assessments contain issues that were not resolved during the IPT process. They are prepared prior to each milestone decision review on acquisition programs. Assessment results are reflected in the Modified Integrated Program Summary (MIPS) and provide the basis for representing any unresolved MANPRINT issues to the MDA. The MANPRINT assessment's objective is to provide an indication, at a par-

ticular point in the acquisition, of the likelihood the eventual manned system will meet its performance requirements. HQDA (ODCSPER) conducts MANPRINT assessments. As required, ARL-HRED drafts MANPRINT Assessments on selected ACAT programs, regardless of system acquisition cost category.

MANPRINTs success also depends upon its ability to influence program documents and procedures to ensure optimal capability between the materiel and designated operator, maintainer, repairer, and support personnel. Embedding MANPRINT requirements in other program documents and procedures makes MANPRINT an integral part of the acquisition process. These documents and procedures include but are not limited to the ORD, the TEMP, and the source selection process. The ICT establishes the requirements which are included in the Operational Requirements Document:

1. The ICT establishes the requirements which are included in the Operational Requirements Document:
   a. ORD Paragraph 4.a—System Performance.
   b. ORD Paragraph 4.c—Other System Characteristics.
   c. ORD Paragraph 5.c—Human Systems Integration (All MANPRINT domains should be addressed.)

2. Test and Evaluation Master Plan. Human performance issues are addressed in the TEMP to provide data to validate that MANPRINT domain requirements from the ORD have been met. Provisions for testing MANPRINT issues are included in the TEMP and should be addressed in measures of performance (MOP) and measures of effectiveness (MOE). The TEMP contains MANPRINT issues and supplies realistic testing condition requirements to the test community.

3. MANPRINT considerations are an explicit part of the source selection planning and implementation process. All required and appropriate MANPRINT requirements and opportunities are considered and evaluated in the best value trade-off analysis associated with source selection for acquisition of all Army systems. Solicitations shall require offerors to respond to all pertinent MANPRINT considerations in the SOW, which reflect requirements from the ORD/MNS.

4.3.8.2 Human Factors Engineering (This paragraph is not present in DoD 5000.2-R.)

Points of contact:

U.S. Army Research Laboratory, Human Research & Engineering Directorate, ATTN: AMSRL-HR-M, Aberdeen Proving Ground, MD 21005-5425.

For more information SME support for HFE application, contact the HFE ARL-HRED field element at the HFE sites listed below:

(1) U.S. Army Air Defense Artillery School
(2) U.S. Army Armament Research, Development and Engineering Center
(3) U.S. Army Armor center and School
(4) U.S. Army Aviation Center and School
(5) U.S. Army Aviation and Missile Command
(6) U.S. Army Edgewood Research, Development and Engineering Center
(7) U.S. Army Communications-Electronics Command
(8) U.S. Army Field Artillery Center and School
(9) U.S. Army Infantry Center and School
(10) U.S. Army Special Operations Command
(11) U.S. Army Natick Research, Development and Engineering
(12) U.S. Army Operational Test and Evaluation Command
(13) U.S. Army Ordnance, Missiles, and Munitions Center and School
(14) U.S. Army Signal Center and Fort Gordon
(15) U.S. Army Simulation, Training and Instrumentation Command
(16) U.S. Army Tank-automotive and Armaments Command
(17) U.S. Army Test and Experimentation Command

If there is no field element at a specific site, contact: U.S. Army Research Laboratory, Human Research & Engineering Directorate, ATTN: AMSRL-HR-M, Aberdeen Proving Ground, MD 21005-5425

References:

MIL-STD-1472E, “Human Engineering.”
MIL-HDBK-46855, “Human Engineering Guidelines for Military Systems, Equipment, and Facilities.”
MIL-STD-1388-1A, “Logistics Support Analysis.”
MIL-STD-1474D, “Noise Limits, for Army Materiel.”

DOD-HDBK-763, “Human Engineering Procedures Guide.”
AR 5-5, Army Studies and Analyses.”
AR 73-1, “Test and Evaluation Policy.”
AR 602-1, “Human Factors Engineering Program.”
AR 602-2, “Manpower and Personnel Integration (MANPRINT) in the System Acquisition Process.”
DA PAM 73-1, “Test and Evaluation in Support of Systems Acquisition.”

The purpose of this section is to provide guidance on implementing the Human Factors Engineering (HFE) domain of MANPRINT as a major technical element within the Human Systems Integration process as outlined in DoD 5000.2-R, part 4, section 4.3.8. MANPRINT implements DoDs Human System Integration (HSI) initiative. This guidance helps Army CBTDEVs, Training Developers (TNGDEVs), and MATDEVs in planning, scheduling, and executing a sound HFE technical effort in support of materiel acquisitions.

HFE is the technical and management effort that includes human performance in the materiel development process. The HFE goals in system design are to increase human performance, enhance total system performance and increase operational effectiveness on the battlefield while decreasing operating and support costs. To accomplish this, one must define and apply HFE data, principles, and criteria to human performance and design requirements during system definition, design, development, evaluation, and deployment of operational and training systems. The application of HFE ensures that system design effectively uses soldiers' mental and physical strengths while compensating for their limitations. HFE is the MANPRINT domain that supports and enhances effective soldier-machine interaction within the desired training time, soldier aptitudes and skills, physiological tolerance limits, and soldier physical capabilities. HFE provides this support by determining the soldier's role in the materiel system, and by defining and developing soldier-materiel interface characteristics, work place layout, and work environment. HFE ensures the system design considers the strengths and limitations of the operators, maintainers, and supporters to enhance total system performance. The HFE Subject Matter Expert (SME) provides the interface to translate manpower, personnel, training, soldier survivability, health hazard, and system safety concerns to effect system design.

Both the MATDEV and CBTDEV implement aspects of HFE in their respective areas in support of the acquisition process. The CBTDEV should ensure HFE is included in the efforts resulting in the establishment of requirements to enhance the Army warfighting capability. HFE should be included in each phase of the Future Requirements Determination Process. The MATDEV should ensure HFE is included in all aspects of materiel development ranging from technology base research, and technology demonstrations through the design of new and modified systems.

The ARL-HRED has the mission to provide HFE support to the MATDEV and CBTDEV in all phases of the acquisition process. That mission includes HFE research and development, concept formulation, analyses, design, and development and test and evaluation. HFE is one of seven MANPRINT domains (see AR 602-2) and interfaces with the ICT Human Systems Integration (HSI)/ MANPRINT Working Group, the MANPRINT Working Integrated Product Team (WIPT), and other MANPRINT domains to produce tradeoffs if necessary. ARL-HRED works to ensure essential participation in the IPT by other MANPRINT domains and inform the IPT leader and the Director of the Army's MANPRINT Program when coverage by any domain is inadequate or there are issues that need to be resolved. HFE develops the MANPRINT position for acquisition process decisions. The MATDEV and CBTDEV should coordinate with ARL-HRED to obtain the required HFE support, facilitate coordination between ARL-HRED and other organizations in the acquisition process, and acquire resources to accomplish the HFE effort. In addition, ARL-HRED develops and coordinates the draft MANPRINT Assessment.

The overall MANPRINT functions within the Army are conducted jointly by the CBTDEV, TNGDEV, and the MATDEV. The task of the CBTDEV and MATDEV is the program integration of the efforts of all seven MANPRINT domains, including coordination of the specific HFE activities listed below, with the HFE subject matter experts (SME) supporting the program. ARL-HRED has the mission to provide the HFE SME. During these various activities, the MATDEV and CBTDEV should assist the HFE practitioner to access other program participants involved in system design and concept development, such as Systems Design Engineering; Integrated Logistic Support; System Safety; Health Hazards, Reliability, Availability, and Maintainability; Training; and Test and Evaluation. ARL-HRED has been directed by the AAE to ensure that it provides adequate coverage for all ICTs and for all IPTs regardless of system acquisition cost categories. ARL-HRED was also directed to ensure adequate coverage by the other MANPRINT domains. To ensure that the spirit of the IPT process is honored, ARL-HRED will inform the IPT leader and the Director of the Army's MANPRINT Program as soon as they determine that a significant issue is not being worked or has high risk of failure.

HFE support in system acquisition.

As identified in MIL-HDBK-46855, the human factors engineer practitioner participates within the materiel acquisition process in three main technical areas: analysis; design and development; and test and evaluation.

1. Analysis area. Continued application of human-centered research data, methods, and tools to the materiel acquisition process ensures maximum operational and training effectiveness of the system. HFE support to this area begins with analyses of the functions that the system must perform to achieve its mission objectives. The analysis of the functions provides data to help determine the best allocation of tasks to personnel, hardware, or software. The results of these analyses are HFE guidance related to combat effectiveness; human work load predictions; soldier-machine interface requirements; and procedural, software, and hardware innovations needed to ensure that the human element will fulfill and enhance total system performance.

2. Design and development area. The purpose of HFE support to this area is to provide human-machine system design guidance that ensures that the design effort considers the strengths and limits of the human operators, maintainers, and supporters. The human-machine interface design includes procedures, software and hardware design, embedded training capabilities/options, training requirements, work environments, and equipment associated with system functions requiring human interaction. The HFE SME converts professional knowledge, expertise, and the results of HFE-related research and analyses into HFE design requirements and assessment criteria. This effort depends heavily upon the appropriate use of HFE databases, tools, and techniques. With this soldier-in-the-loop emphasis, the final system will provide an effective design that will operate within human performance strengths and limits, meet system functional requirements, and fulfill mission goals with the least possible demands on manpower, personnel aptitudes and skills and training resources.

3. Test and evaluation (T&E) area. The HFE support to the T&E effort is critical for assuring that the system's soldier-machine interface, associated procedures, training and human performance requirements can be achieved within the intended operational environment. Areas to be considered include soldier aptitudes, tasks and skill levels, training, human performance reliability, and life support and biomedical factors that affect human performance. HFE SMEs work closely with the CBTDEVs and MATDEVs when forming critical HFE and human performance-related issues and criteria to be used in conducting developmental and operational T&E. HFE T&E results and lessons learned provide an overall assessment of the tested design capability to meet user needs with the soldier-in-the-loop, identify improvements to increase the system's combat effectiveness, and provide human performance data and design criteria for follow-on acquisitions or modifications.

Procedures for applying HFE during system acquisition.

HFE offers a large body of scientific knowledge and technical data that, when applied, ensures the effective integration of the human component in the system design.

The following areas are the main materiel acquisition process activities that should receive HFE support:
Technology Base Research
Concepts and Studies
Working Integrated Product Team (WIPT)
Front-End Analyses
Mission Need Statement (MNS)
Request for Proposal
Source Selection Process
System Design and Development
Operational Requirements Document (ORD)
Test and Evaluation
Training, TADSS
Human Factors Engineering Assessment
Draft MANPRINT Assessment
Manpower Estimate (ME)
Post-fielding Evaluations

4.3.9 Interoperability

Point of Contact: Director of Information Systems for Command, Control, and Communications (DISC4), ATTN: SAIS-IAA-Q, 107 Army Pentagon, Washington, DC 20310-0107

4.3.10 Configuration Management (This paragraph is not present in DoD 5000.2-R.)

Points of contact:

Director, Acquisition Policy (SAAL-RP), Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 2511 Jefferson Davis Highway, Arlington, VA 22202-3911.
U.S. Army Materiel Command, ATTN: AMCRDA-TE, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001

References:

MIL-HDBK-59B, “Continuous Acquisition and Life-Cycle Support (CALS) Implementation Guide.”
MIL-STD-973, “Configuration Management.”
MIL-STD-2549, “Configuration Management Standards.”
MIL-DTL-31000A, “Technical Data Packages.”
AR 5-11, “Management of Army Models and Simulations.”

Configuration Management (CM) is a discipline applying technical and administrative direction and surveillance over the life cycle of systems/items. CM identifies and documents essential functional and physical characteristics; controls changes; records and reports information; and verifies conformance to specifications, drawings, interface control documents and other contract requirements of a system/item. For digital data files (See MIL-HDBK-59) it uniquely identifies the digital data files, including versions of the file and their status (for example working, released, submitted, approved), and records and reports information needed to manage the data files effectively, including the status of updated versions of files.

The degree of CM control to be exercised by the government is determined by the systems/items acquisition, maintenance and support strategies. CM is accomplished using the Technical Data Package (TDP), governed by MIL-DTL-31000A, Detail Specification, Technical Data Packages, for the system/item.

The current (preferred) CM approach is for the government to maintain configuration control of only the system specification and performance specifications for items comprising the system (functional and allocated configuration baselines). The Governments' emphasis is toward controlling performance, form, fit, and function requirements and shift away from controlling detailed engineering drawings and material/process specifications. The top level engineering and manufacturing data (system and performance specifications) resulting from development and production will remain a contract deliverable item. Any detailed data will then be provided to future contractors as information only along with mandatory system specification, performance specification, and interface requirements. This performance based CM approach is in place of the historical (traditional) CM approach of procuring, and placing under government control, a detailed design TDP.

One major limitation of the traditional CM approach is it hinders, if not actually precludes, contractors from exercising initiative/originality in searching for more cost-effective design solutions and manufacturing methods. Additionally, it frequently results in blindly buying excess detailed technical data rather than acquiring only that data necessary for fulfilling the stated requirements.

The current approach represents a significant change to the traditional CM approach; however, it provides an improved way of doing business when properly applied. In some cases the best CM solution will be a combination of the traditional approach and this performance-based CM approach. In any case, the Government should acquire and control the minimum essential data to support the systems' requirements throughout its' life cycle.

Information regarding the CM discipline is provided in the various references for this section. Highlighted below are critical areas that warrant mention:

1. The degree of control to be exercised by the Government determines the requirements for the CM program. The Government should exercise only that degree of control necessary to assure adequate system support throughout the systems' life cycle. The degree of Government control and the CM program requirements should be detailed in the Government configuration management plan (CMP).

2. There should be only one Configuration Manager for any given system/item. The Configuration Manager should have primary design responsibility and will normally be at the research and development organization responsible for development of the item/system. Inventory Control Points (ICPs), depots, and other support organizations should not appoint configuration managers or attempt to exercise configuration control. Although, under the current CM approach, the contractor exercises CM authority of the detailed design, the CM authority for the TDP used on the contract remains with the government.

3. The Configuration Manager's responsibility should be complete, and the Configuration Manager's decisions should be autonomous, particularly approval/disapproval of all CM actions. The Configuration Man-

ager may elect to retain full and complete CM responsibility or delegate some portion to the organization providing matrix support. To the maximum extent possible, configuration management should be the responsibility of the contractor with minimum Government oversight of the contractor's actions.

4. A configuration control board (CCB) should be formed to assist in evaluating and approving/disapproving proposed changes to the configuration baselines established by the Government. The CCB should have members representing all disciplines that may be impacted by a proposed change. Ideally the CCB will be the Integrated Product Team assigned to the system/item. CCB members should provide a detailed evaluation of the impact of each proposed change in their respective areas. The CCB provides the Configuration Manager recommendations regarding approval/disapproval. The decision authority is the Configuration Manager.

5. To the maximum extent feasible, the contractors' existing in-house CM policies and procedures should be used.

6. Configuration Items (CIs) are described in DoD 5000.2-R. CIs should be identified at the top most level of the work breakdown structure which will allow proper fielding and full supportability of the system/item throughout its' life cycle. This is necessary to allow contractor flexibility under performance-based acquisitions and minimize the number of changes requiring Government action. Identifying CIs at the lower levels of the work breakdown structure significantly restricts contractor initiative and actions that the contractor can take without Government approval.

7. Configuration baselines are described in DoD 5000.2-R. The functional and allocated configuration baselines are performance, form, fit, and function oriented, and should be the only configuration baselines required for performance-based acquisitions. Where a product configuration baseline is deemed essential, the level of detail in the baseline should be the minimum to support configuration control of the system/item.

8. Use of performance-based acquisitions and contractor configuration management of product data will minimize the number of changes/deviations/waivers that require processing by the Government.

9. For performance-based acquisitions where the Government is not establishing a product configuration baseline, Physical Configuration Audits will not be required.

Documentation, as used in CM, means the formal records for a system/item, regardless of the media (hard copy, magnetic tape, optical disc, electronic, etc.) in which it is generated, transmitted, stored or maintained. Documentation must comply with the appropriate transmittal standards for the media in which it is presented. The standards for use are the Continuous Acquisition and Life-Cycle Support (CALS) standards (see MIL-HDBK-59).

The contractor uses the requirements set forth in MIL-STD-2549, Configuration Management, for delivery of data to the Government.

4.3.11 Technical Data Management (This paragraph is not present in DoD 5000.2-R.)

Points of contact:

HQDA, ATTN: SAAL-ZP, Skyline 6, Suite 309, 5109 Leesburg Pike, Falls Church, VA 22041-3201

U.S. Army Materiel Command, Deputy Chief of Staff for Research, Development and Engineering, ATTN: AMCRDA-TE, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001

References:

DOD 5010.12-M, “Procedures for the Acquisition and Management of Technical Data.”
MIL-STD-961D, “DoD Standard Practice Defense Specifications.”
MIL-STD-962C, “Defense Standards and Handbooks.”
MIL-STD-963A, “Preparation of Data Item Descriptions (DIDs).”
MIL-HDBK-248B, “Acquisition Streamlining.”
MIL-DLT-3100A, “General Specifications for Technical Data Packages.”
AMC PAM 715-17, “Performance-Based Acquisition, March 15, 1994.”

This section addresses data requirements, Data Item Descriptions (DID), and Technical Data Packages (TDPs). This section applies to all active Army elements having responsibility for the development, acquisition, and support of military materiel.

Concept

Traditional Army acquisition programs impose a blanket of functional management requirements on contractors. These requirements set the stage for significant government oversight of the contractors' processes for engineering management, specialty engineering, integrated logistic support and risk management (e.g.,

program management). The current Army acquisition emphasis is to manage programs through a zero-base approach. This approach requires justification of all requirements not mandated by law, regulation, or policy, as being essential and cost-effective prior to their use. In this section the focus and application of the zero-base concept is on technical data requirements or, specifically, requirements that specify what data the contractor is required to generate and/or deliver to the government.

The DD Form 1423 (Contract Data Requirement List (CDRL)) is used for identifying proposed data requirements in solicitations and deliverable data items in contracts (with the exception of limited data requirements mandated by FAR Clause, which are not listed on the form). The Army's zero-based approach to data requirements has not eliminated the use of this form, which sets forth details necessary for contractor compliance in a comprehensive and consistent manner.

The DD Form 1664 (Data Item Description (DID)) describes the intended use, preparation instructions, content and format of a deliverable data requirement. The Army's zero-based data requirements approach has not changed the DID review and approval process.

In addition to data requirements, the acquisition of technical data is changing. Historically, the Army has procured the vast majority of its materiel to detailed product Technical Data Packages (TDPs). These packages include military specifications and standards; detailed manufacturing drawings; manufacturing processes; and detailed inspection procedures, test equipment and gage designs. The justification for the detailed, Government-controlled TDP has been to assure the quality of the product; to provide configuration control; to achieve part standardization; and to support competitive procurement of the item and its spare parts. This “build to print” philosophy requires a high level of technical and contract administrative activity by both the contractor and the Government; offers little opportunity or incentive for the contractor to improve either the product or manufacturing process; and, therefore, limits cost reduction opportunities.

1. As a result of these traditional practices, the Army has millions of drawings and specifications it must maintain to support procurement of items and spares. These TDPs consume many resources to control and post engineering changes, and to operate technical data repositories. They also represent obsolete technology in many instances.

2. For these reasons, the current Army emphasis is on acquiring materiel through the use of concept and development TDPs (performance specifications supplemented by interface control drawings and other technical data as necessary to define the system's/item's performance, form, fit, and function requirements), and on avoiding buying product (build-to-print) TDPs. This approach allows greater flexibility in the design and manufacturing of weapon systems and has proven to provide better, more-cost effective products. Further, only that data needed for competition and life cycle support is acquired. The data requirement must be based upon the approved acquisition strategy, Acquisition Plan and maintenance strategy. In all cases, commercial drawing formats are encouraged and the contractor maintains all the technical data throughout the contract, resulting in a cost savings to the Army by reducing in-house resources needed to maintain the TDPs.

Objectives.

The objectives of the Army's Technical Data Management Program are as follows:

1. To achieve uniformity in data management policies, procedures, practices, and requirements.

2. To remove barriers that prevent industry from making full use of commercial products, practices, and processes.

3. To eliminate non-value-added requirements which are not essential to the design and/or production of an item.

4. To encourage the use of performance specifications.

5. To encourage contractor management of detailed engineering product data.

This section addresses the implementation of data management in the areas of data requirements, DIDs, and TDPs to achieve the objectives expressed above.

1. Data requirements. The key to eliminating non-value-added requirements is streamlining or zero-basing and having industry participate in data requirements identification. The following paragraphs provide specific information on how this can be done:

a. Streamlining Data Requirements. Streamlining is an important process in eliminating non-value-added requirements that drive up the acquisition costs. To streamline data requirements, a new base line must be established for every acquisition by identifying those requirements designated by law, regulation, or policy, and then adding those data requirements justified as being essential to achieve a product with the desired performance and support capability within the stated cost goals. Streamlining is accomplished by selec-

tively applying and tailoring recurring data requirements listed in the Acquisition Management Systems and Data Requirements Control List (AMSDL) (DoD 5010.12L). Tailoring of data requirements, described in the DID DD Form 1664, consists of modifying, altering, or changing the requirement. It does not include adding requirements. Additional guidance for tailoring can be obtained in MIL-HDBK-248A Application & Tailoring of Requirements.

b. Unique Requirements. Unique data requirements not identified in DoD 5010.12L (AMSDL) may be used in solicitations, contracts, and orders when approved for one-time use by the data manager. DIDs approved for one-time use are valid for only the contract for which they are approved. Follow-up action is necessary to allow re-use, gain full approval, and have the DID listed in the AMSDL if it is a recurring data requirement.

c. Industry Involvement. Industry can play a major role in eliminating non-value-added requirements and barriers to commercial products, practices, and processes through early involvement with the Government in identifying data requirement (i.e., evaluating proposed data requirements and offering alternatives that could cost less if adopted). A draft Request for Proposal (RFP) can be a useful tool in this process.

d. Data Requirement Review and Approval. It is recommended that management, functional discipline, and data requirements be reviewed and approved by the Head of the Contracting Activity (HCA), or his designee, prior to their use in research and development solicitations and contracts over $15M; and all other acquisitions over $30M. For Program Executive Officer (PEO) managed programs approval can be made by the head of the contracting activity, in coordination with the appropriate PEO/Program/Project/ Product Manager (PM). The basis for approval can be determined on essentiality and cost effectiveness. The Milestone Decision Authority can settle disagreements between the HCA and PEOs/PMs. It is recommended all other requirements below the above dollar threshold be reviewed by the appropriate level of authority within the organization.

2. Data Item Description (DID). The vehicle for describing data requirements and achieving uniformity in data management policies, procedures and requirements in a solicitation or contract is the DID. The preparation of DIDs and the approval process is discussed in the following paragraphs:

a. DID (DD Form 1664) Preparation. DIDs fall into two categories, Recurring and One-Time. Recurring DIDs are those that repeat year after year on a solicitation or contract. One-Time DIDs are those that are approved for one-time use on a single solicitation or contract. Both Recurring and One-Time DIDs are prepared in accordance with MIL-STD-963B.

b. DID Approval Process. All Recurring DIDs should be submitted for approval for incorporation in the AMSDL. The approval process begins at the MSC/buying activity through the Army's data manager to OSD. Specific DID approval authorities are as follows:

(1) The point of contact (in other words, Army data manager) for data management activity is the U.S. Army Materiel Command, Deputy Chief of Staff for Research, Development and Acquisition (Integrated Engineering Management Division, AMCRDA-TE).

(2) The MSC/buying activity point of contact or data manager. The name and phone number of the point of contact should be provided to the Army data manager, and updated as changes occur.

(3) Organizations that do not have a point of contact for data management (for example, a data management officer) for assisting in DID preparation and approval should use the nearest available Army office having that capability.

(4) It is recommended Recurring and One-Time DIDs be coordinated with all users. The exception is where a Recurring DID is part of a Military Standard, then coordination should be in accordance with DoD 4120.3-M.

(5) The Army data manager approves One-Time DIDs. A copy of the One-Time DID attached to a memorandum justifying the requirement should be furnished to the Army data manager. The MSC/buying activity data manager can review the One-Time DID to ensure adherence to DoD/Army policy before submission to the Army data manager.

c. Document summary list. Data requirements and the specific tailoring of data requirements contained in military standards and DIDs can be summarized on a Document Summary List. This provides a consolidated reference point listing all the military standards and DIDs contained in the RFP and contract statement of work. (See Figure 4-1.)

3. Technical Data Packages (TDPs). As indicated in the TDP information above, the Army is moving to TDPs based on performance, form, fit and function and avoiding detailed product (build-to-print) TDPs. This changes the content of TDPs, but not how the Army buys and/or uses TDPs. This section discusses the mechanics of buying TDPs.

a. Acquisition. The acquisition of a TDP should be planned, programmed, budgeted, funded, and executed to assure availability of the TDP in time to initiate procurement. Also, commercial drawing formats should be considered in TDP acquisitions, especially for Commercial and Non-developmental Items (CaNDI).

b. Ordering Of Data. The ordering of TDPs, Technical Manuals and General Data should be done in accordance with the Defense Federal Acquisition Regulation Supplement (Subpart 204.7103-1).

4. Automation.

a. Government-Industry Data Exchange Program (GIDEP). The GIDEP promotes an exchange of information between Government and industry. It seeks to reduce or eliminate duplicate expenditures of time and money by making maximum use of existing technical data essential in the research, design, development, production, and operational life cycle of systems and equipment. An entry on the DID (DD Form 1664) is provided.

b. Interactive Electronic Technical Manuals (IETM). The automation of technical manuals is being conducted under the IETM program. The Logistic Support Activity (LOGSA (U.S. Army Materiel Command, Logistics Support Activity, ATTN: AMXLS-AP, Redstone Arsenal, AL 35898-7466)) is the Executive Agent for the Army IETM program and should be contacted to use IETM.

4.3.12 Corrosion Prevention and Control (CPC) (This paragraph not present in DoD 5000.2-R.)

Point of Contact: U.S. Army Tank-automotive & Armaments Command, Army Research, Development & Engineering Center, Picatinny Arsenal, NJ 07806-5000

Reference: AR 750-59, “Army Corrosion Prevention and Control Program.”

This section contains guidelines for establishing and managing the Army CPC program throughout the life cycle of Army materiel systems. It applies to all active Army elements having responsibility for the development, acquisition, and support of military materiel. The ultimate goal of the CPC program is to reduce corrosion in Army products. This general goal must translate into specific, achievable objectives so that manpower and cost savings can be realized. A large share of a systems O&S cost can be attributed to operation and maintenance due to corrosion. The ability to prevent or detect corrosion in a reliable and consistent way reduces these costs by allowing maintenance periods to be extended until there is a need to repair or replace parts due to failure or wear out. CPC should result in significant savings in the operation and maintenance costs for the fielded units as well as helps the field commander reach the 90 percent readiness goal.

Document Summary List

1. General. The term “documents” used in this figure means documents employed in a solicitation, contract, or order to identify specification requirements and data requirements. The term “documents” includes any form or structure (e.g., Military or Federal Specifications or Standards, Standard and One-Time Data Item Descriptions, unique system or program specifications) used to delineate specification and data requirements.

2. The Document Summary List (DSL) should:

a. Identify by number, title, and issuance date all documents (tailored or untailored) cited in a solicitation, contract, or order, except for TDP documents.

b. Identify the Document Category cited document.

c. Cross-reference the applicable section, paragraph, subparagraph, and line (within the paragraph or subparagraph) of the solicitation, contract, or order where the document is cited.

d. Specific tailoring applicable to the cited document should be identified on the DSL.

3. All documents, tailored and untailored, can be directly cited on the DSL.

4. Extensive Tailoring. An attachment to the DSL can be used as needed to handle the overflow of tailoring information. The DSL should reference the attachment.

5. Separation of Tailoring. When separation of the tailoring applicable to a document from the contractual tasking statement would result in a significant and unacceptable loss of context, the DSL should identify the section, paragraph and subparagraph, and line (within the paragraph or subparagraph) in the solicitation, contract, or order where the tailoring is contained.

6. Documents identified in a TDP may be excluded from the DSL.

7. One-time use documents should be identified and attached to the DSL.

8. Document Summary List Format. The Document Summary List should be in the following format:

Document Summary List
for
Procurement/Solicitation/Contract Number
Procurement/Solicitation/Contract Title

1. Document Identification Number
Document
Category
Document Title
Document Date
(Contract Reference)
Applicable Tailoring

Figure 4-1. Document Summary List

The following guidance is intended to provide PEOs, PMs, CBTDEVs, MATDEVs, testers, independent evaluators, and system engineers with the information necessary to develop, initiate, and effectively manage a CPC program. The CPC program helps guide system design, training, and use for current systems and future system development.

To achieve the CPC objectives, a two pronged approach is necessary. The first is to identify, test and implement the latest CPC state-of-the-art or best commercial practices available in industry. The second is to develop, verify, and field new and emerging technologies that can be effectively used to prevent and/or combat corrosion. Since, in most cases, corrosion issues are similar among many different commodities, the results of this two pronged attack are:

1. The fielding of new systems and assemblies with CPC inherent in their design and manufacture.

2. The development of repair procedures and treatments that can be applied to currently fielded equipment.

The CPC plan addresses several distinct aspects: management structure, policy, communication, and science and technology. All of these aspects are meshed together to form a whole. Any missing part dimin-

ishes the whole and jeopardizes the successful corrosion prevention efforts. The management structure of the plan are based on the concept of having a consistent approach to problem solving while maximizing autonomy for identifying corrosion problems/issues and planning the work to address these problems.

The aspect of communications addresses the issues of training, accurate and current data reporting, testing, and user readiness. The science and technology aspect addresses such things as surface protection, material compatibility, sensor technology, simulation and modeling, lubricants, field and laboratory surveillance, and packaging.

A major policy focus is to ensure that the most appropriate and economical corrosion control technologies are included in the weapon system design, and that CPC is an integral part of the acquisition process for new systems and rebuild programs. To ensure the CPC plan does not become isolated within the system development, provisions are made to incorporate CPC into key system documents and milestone reviews. Examples of this are:

1. Statement of Work (SOW)—SOWs should include requirements for CPC.

2. Publications—Technical Manuals (TMs), Technical Bulletins (TBs), Storage Serviceability Standards (SSSs), and Depot Maintenance Work Requirements (DMWR) should include a separate section or appendix that specifically addresses CPC.

3. Technical Data Packages (TDPs)—TDP reviews for CPC should be conducted on drawings, military specifications, and Quality Assurance Provisions (QAPs) for items/systems in development. These reviews should include participation of materials experts from the Government, academia and industry. Review of product assurance documents should assure comprehensive inspection for CPC with particular emphasis on inspections for protective finishes. Accelerated Corrosion Testing, such as Cyclic Salt Fog Testing should be included in these documents, when applicable.

4. Performance Specifications—Performance specifications should contain requirements for CPC testing to assure that the design is resistant to corrosion and material deterioration for the specified life cycle of the equipment. It is essential that performance specifications used in conjunction with Non-Development Item (CaNDI) acquisitions contain comprehensive CPC requirements, as there may be no Government controlled drawings or other controls on the design.

5. Test and Evaluation Master Plans (TEMPs)—TEMPs should include testing for CPC. Testing includes exposure and performance tests in natural and accelerated environments where corrosion is most likely to occur. Corrosion and deterioration testing in all anticipated storage and use environments will be an essential consideration (for example, exposure to humid tropic environments is effective in accelerating corrosion). Comprehensive CPC testing is particularly important for CaNDI acquisitions, especially in cases where design information and technical data packages are not available for review and evaluation.

6. Test Incident Reports (TIRs)—TIRs involving corrosion or other material deterioration provide early indication of potential CPC problems. Each requires follow-up to determine that the cause of the problem has been identified and corrected. This applies to all such TIRs, not only those that impact performance, but those involving “cosmetic” or “incidental” corrosion as well. The latter can result in a maintenance burden when the item is fielded.

7. Materiel Release for Issue—Supporting data packages for materiel release of first time procurements should include a comprehensive summary of the CPC activities on the item.

8. Predictive Surveillance—Predictive surveillance should be utilized to characterize failure mechanisms, predict failure rates, and determine storage life of materiel. New items/systems should plan for involvement of predictive surveillance analysis of new components and the system to provide up-front information on potential failures that could occur during fielding or storage. Results should be used to upgrade system requirements to prevent future failures.

4.3.13 Explosive Ordnance Disposal (EOD) (This paragraph not present in DoD 5000.2-R.)

Point of Contact: Commander, US Army Armament Research and Development Command, ATTN: AMSTA-AR-FSX, Bldg 281, Picatinny Arsenal, NJ 07806-5000

References:

DoDD 5160.62, “Single Manager Responsibility for Military Explosive Ordnance Disposal Technology and Training.”

AR 75-15, “Responsibilities and Procedures for Explosive Ordnance Disposal.”

ARDEC Pam 70-3, “A Guide for Weapon Systems Developers.”

All Army programs for acquisition of explosive ordnance (including applicable weapon delivery systems), combat vehicles, remotely piloted vehicles and aircraft (and for items that could be misidentified as Explosive Ordnance) shall include the development of EOD technical data (in accordance with the specifications of the Single Manger), and the recommendation of unique tools and equipment necessary for the render-safe and disposal of the explosive ordnance.

Army developers use the TACOM-ARDEC, FSAC, and EOD Technology Division at Picatinny Arsenal to assist them in developing these unique tools and procedures. Successful procedures are forwarded to a joint service EOD acceptance board and are approved, published and distributed as the EOD technical manual for a particular item.

1. EOD procedures are developed, validated, verified, and fielded 30 days before the fielding of new explosive ordnance. If EOD procedures are not available, new explosive ordnance shall not be deployed until verified EOD procedures and tools and/or equipment have been issued to EOD units of the applicable Service(s)., except for urgent solutions approved by the Secretary of Defense.

2. Testing and transportation of developmental explosive ordnance, including foreign ordnance being evaluated for possible US acquisition, shall not begin until sufficient data on its hazards and functioning are available for EOD response to incidents or accidents during transportation and testing. This information should be available no later than 90 days prior to testing and transportation.

4.4 Other Design Considerations

Point of Contact: Director, Acquisition Policy (SAAL-RP), Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 2511 Jefferson Davis Highway, Arlington, VA 22202-3911.

4.4.1 Survivability

Points of contact:

Office of the Assistant Secretary of the Army (Acquisition, Logistics, and Technology), 103 Army Pentagon, ATTN: SAAL-ZCA, Washington, DC 20310-0103

HQDA, Deputy Chief of Staff for Personnel, 300 Army Pentagon, ATTN: DAPE-MR, Washington, DC 20310-0300

U.S. Army Materiel Command, ATTN: AMCDCG-A, 5001 Eisenhower Avenue, Alexandria, VA 22333

U.S. Army Training and Doctrine Command, ATTN: ATCD-SN, Fort Monroe, VA 23651-5000

U.S. Army Space and Missile Defense Command, Systems Analysis and Battle Management Directorate, ATTN: CSSD-SA-EV, Huntsville, AL 35807-3801

U.S. Army Chemical and Biological Defense Command, Office of the Director for Chemical and Biological Defense Research, Development, and Acquisition, ATTN: AMSCB-EO/SAAL-ZCS, Aberdeen Proving Ground, MD 21010-5423

U.S. Army Research Laboratory, Survivability/ Lethality Analysis Directorate, ATTN: AMSRL-SL, White Sands, NM 88002-5513

U.S. Army Nuclear and Chemical Agency, ATTN: ATNA-ZA, 7150 Heller Loop, Suite 101, Springfield, VA 22150-3198

Army Materiel Systems Analysis Activity, Strategy Programming and Policy Office, ATTN: AMXSY-SA, Aberdeen Proving Ground, MD 21050

U.S. Army Warfare Center, ATTN: U.S. Army Reprogramming Analysis Team (ARAT), Eglin AFB, FL 32542-6008

U.S. Army Operational Test and Evaluation Command, Office of Policy and Methodology, ATTN: CSTE-MP, 4501 Ford Ave., Park Center IV, Alexandria, VA 22302-4134

U.S. Army Evaluation Analysis Center, ATTN: CSTE-EAC, B4120, Aberdeen Proving Ground, MD 21050-3013

U.S. Army Aviation Research, Development and Engineering Center, ATTN: AMSAT-R-TV, Applied Aviation Technology Directorate, Fort Eustis, VA 23604-5577

U.S. Army Test and Evaluation Command, ATTN: AMSTE-TA-O, Aberdeen Proving Ground, MD 21005-5055

U.S. Army Medical Research and Development Command, ATTN: SGRD-PLC, Fort Detrick, MD 21702

Commander, U.S. Army Ordnance Center and Schools, ATTN: ATSL-CD (PAT), Aberdeen Proving Ground, MD 21005-5000

U.S. Army Communications Electronics Command Research, Development and Engineering Center, ATTN: Technical Director, Fort Monmouth, NJ 07703

U.S. Army Defense Ammunition Logistics Activity, Picatinny Arsenal, New Jersey 07806-5000
Director, Directorate of Applied Technologies, Test, & Simulations, ATTN: STEWS-NE-A, White Sands Missile Range, NM 88002-5158

References:

DOD Directive 5160.5, “Responsibilities for RD&A of Chemical Weapons and CB Defense.”
MIL-STD 2105B, “Hazard Assessment Tests for Non-Nuclear Munitions.
AR 15-41, “Nuclear and Chemical Survivability Committee.”
AR 70-75, “Survivability of Army Personnel and Materiel.”
AR 71-9, “Materiel Requirements.”
Memorandum, SAAL-ZBA, “ASARC Review Process.”
Memorandum, DAMO-SSD, “Nuclear, Biological, and Chemical Survivability Policy for Tactical Systems,” September 25, 1997.
AR 525-15, (SRD) “Software Reprogramming Policy for Target Sensing Weapon Systems (U).”
AR 73-1, “Test and Evaluation Policy.”
DA PAM 73-6, “Live Fire Test and Evaluation Guidelines.”
AR 40-10, U.S. “Health Hazard Assessment Program in Support of the Army Materiel Acquisition Decision Process.”
Title 10, U.S. Code, Section 2366.
CJCSI 3170.01 (Formally MOP 77), “Requirement Generation System Policies and Procedures.”

This section assists combat developers (CBTDEV) and materiel developers (MATDEV) by providing guidance and procedures for attaining soldier and system survivability goals and objectives as required by DoD 5000.2-R. The procedures in this section apply to Major Defense Acquisition Programs (MDAPs) and Major Automated Information System (MAIS) systems.

DoD policy requires that survivability against the full spectrum of battlefield threats found in the various levels of conflict be considered, in an integrated manner, in all systems acquisition programs, regardless of ACAT level. Design munitions to be survivable against the threat of unplanned stimuli. Insensitive munition design enhances overall system survivability. Survivability is not restricted to hardware and software, but includes soldier and force survivability. Soldier survivability is the 7th domain of Manpower and Personnel Integration (MANPRINT). Survivability requirements are addressed for all new system developments, commercial and non-developmental items (CaNDI), and for those modifications that affect a critical survivability characteristic. After Milestone II, threat and mission changes may trigger a reassessment of survivability requirements. Under unique circumstances, policy does provide for exemptions to survivability requirements and waivers to survivability criteria. The MATDEV, in coordination with the CBTDEV, provides evidence that the survivability requirements have been met; however, the MATDEV bears final responsibility and reports system progress to the milestone decision authority (MDA).

The survivability philosophy is based on incorporating requirements into the planning and execution of all aspects of a system's acquisition life cycle, beginning with the earliest phases. Initial survivability requirements are addressed for all new system developments and for those modifications that affect a critical survivability characteristic. Survivability requirements are given for CaNDI as well as for developmental items, to support CaNDI acquisition decisions. Threat changes and mission changes also trigger a reassessment of survivability requirements.

Planning for, and achieving both soldier and system survivability under battlefield conditions is a continuing process during development, requiring a concurrent engineering approach and a broad range of technical expertise. CBTDEVs and MATDEVs should aggressively obtain system survivability support from Army activities and from industry. CBTDEVs coordinate the survivability aspects of requirements with the appropriate activities to ensure that the requirements are reasonable and attainable. The MATDEV plans for survivability (both soldier and system) at the beginning of the program. The focal point for technical survivability support is the Army Research Laboratory's (ARL) Survivability/Lethality Analysis Directorate (SLAD) and for advice and support concerning insensitive munition survivability technologies is the US Army Defense Ammunition Logistics Activity (DALA). Bringing both SLAD and DALA into the program early enables survivability design issues to be identified and addressed most effectively, reducing the likely hood of these factors becoming major cost drivers. The MATDEV consults the testers and independent evaluators for the program early in the survivability effort so test and evaluation issues can be identified and addressed in a timely manner.

1. Requirements. The threat and operational environment stated in the Mission Need Statement (MNS) guides preliminary survivability planning. The Operational Requirements Document (ORD) includes survivability thresholds and objectives and states if the need is mission critical. It defines survivability (both soldier

and system) requirements, identifying in general terms the threats to the system, based on the System Threat Assessment Report (STAR), including conventional ballistic, electronic warfare (EW), nuclear weapons effects, smokes and obscurants to include their potential anti-material effects (in other words, abrasion, corrosion, coating of optics), nuclear, biological and chemical (NBC) contamination, and advanced threats, such as directed energy. The requirements process will also address a munitions requirement to withstand unplanned stimuli which may be encountered throughout the operational and logistical life of the item. Munition survivability design will be consistent with requirements and with the goal to achieve the least sensitive munition design. This will include the ability of the system to withstand the effects of such threats as sympathetic reactions, bullet impact, fast and slow fire and other threats identified by the Threat Hazards Assessment (THA).

2. Survivability Planning. Survivability requirements for both soldier and system impact the acquisition strategy. The acquisition strategy for an Army system includes a survivability strategy, carefully planned and chosen by the MATDEV in coordination with the CBTDEV; the tester; the independent evaluator; research, development and engineering centers (RDECs); the ARL/SLAD; and the Munition Vulnerability Assessment Panel (MVAP). SLAD is the Army activity charged with maintaining the technical expertise to advise the developmental community on the effects of all threats on Army materiel. The DALA and MVAP in conjunction with the Army Executive Agent for Insensitive Munition (AEA-IM), advises the Army development community of technologies to address munition threat hazards. Survivability planning for an acquisition program will include-

a. An intelligence assessment of the threat to the mission(s);

b. For munition systems, a Threat Hazard Assessment that addresses the operational and logistical life cycle hazard posed by unplanned stimuli.

c. A review of doctrine, training, leader development, organization, and technical solutions or features that mitigate the threat.

d. A risk assessment of the ability of the materiel to meet mission requirements in the operational environment;

e. Assignment of survivability (both soldier and system) and insensitive munitions goals in the context of the survivability of other systems of the force; and,

f. Investigation and development of concepts, techniques, and solutions that can be used to enhance the materiel survivability.

3. Multiple Solutions. Designing-in survivability early is the most effective way of achieving desired goals. Survivability planning includes consideration of doctrinal, tactical and training fixes or enhancements, as well as hardware and software solutions. Judicious use of risk assessment and Threat Hazard Assessment, with an integrated survivability analysis across the spectrum of battlefield threats is key to the trade-off process. Options are assessed in the trade-off analysis and selected ones are incorporated into the Analysis of Alternatives (AoAs).

4. Program Execution. The survivability of the system is directly related to the early planning and incorporation of appropriate technology and design considerations. The principal methods by which the MATDEV can drive the system design in the desired direction are the request for proposal, system specification, the source selection process, and the design review process.

a. Request for Proposal. Critical survivability characteristics should be addressed during the MATDEV crosswalk between the request for proposal and the ORD. The contract data requirements list (CDRL) should be coordinated with appropriate Army technical experts to ensure that all data requirements are satisfied.

b. System Specification. Survivability should be explicitly included in the specification and statement of work. System specification should clearly identify the survivability performance requirements in (quantifiable) engineering terms and not in battlefield operational terms. In addition, the system specification should also contain a specific method by which the Government determines compliance with each survivability requirement.

c. Source Selection Process. The Source Selection Plan and the Request for Proposal specify what survivability information must be part of the contractor's proposal and the relative importance of the survivability information in the evaluation process. Source selection boards should use Army survivability experts for assistance and advice in the review and evaluation of contractor's proposals, because of the complexity and subtlety of survivability issues.

d. Design Review Process. Design reviews should include presentations by Army survivability experts on the required survivability analyses and status of compliance with each survivability requirement.

5. Survivability Analysis. Survivability analysis is a process that starts during phase 0 and continues throughout the life cycle of the system. Survivability analysis relies on modeling and simulation results, backed up by the necessary confirmation lab and field investigations and experiments, to ensure that items developed are ready for test and evaluation. Modeling and simulation conducted early in the development will save time and money when systems are field tested and evaluated later in the acquisition process. They will also expand the Army's knowledge of survivability mechanisms and characteristics. Survivability analysis will be integrated over the full spectrum of battlefield threats to ensure that synergistic threat effects are adequately addressed. Developers will:

a. Consider survivability with the other critical system characteristics. Trade-offs will typically be required. Greater lethality provided to a system will thus increase survivability by destroying threat systems before they can have effect. The balance of survivability, lethality, deployability, and sustainability must be maintained for effective mission accomplishment;

b. Enhance survivability against the array of different threats by using synergism among survivability mechanisms. For example, armor, jammers, smoke, obscurants, and insensitive munitions can work together to increase survivability against smart weapons. Survivability in each discipline (for example, EW) cannot be considered in isolation, but as part of an integrated survivability strategy;

c. Obtain nuclear survivability criteria, high-altitude electromagnetic effects (HEMP) criteria, and NBC contamination survivability criteria for mission critical systems from the U.S. Army Nuclear and Chemical Agency.

d. Ensure appropriate survivability analyses and Threat Hazard Assessment are conducted as the program progresses, and plan for the use of analytic methods, modeling, and simulation, hardware-and-soldier-in-the-loop modeling, and experimental assessment;

e. Ensure survivability is re-analyzed when there are significant modifications of the materiel, the mission of the system changes, or there is a significant change in the threat or system replenishment.

6. Test and Evaluation. The Army independent evaluators ensure that survivability issues are addressed in the System Evaluation Plan (SEP) and test design plans. These plans form the basis for complete and thorough coordination of all survivability test planning. Modeling and simulation is used extensively, especially in those cases where obtaining the required data may be impossible due to regulatory or environmental restrictions. The T&E IPT may include a survivability subgroup. This subgroup could also serve as the live fire test and evaluation subgroup, and is composed of members from the threat community, independent evaluators, SLAD, testers, MATDEV and CBTDEV. Independent evaluations include the relationship of test results and modeling with the ORD requirements. The independent evaluation includes the impact of the system on Army organizations, operational effectiveness, and operational sustainability, as well as the technical system performance required by the ORD. See AR 73-1, DA PAM 73-6, and MIL-STD 2105-B for detailed survivability test and evaluation guidance.

7. Survivability Review Process. Survivability of the system and soldier in the context of systems effectiveness is reported at all milestone reviews and at appropriate IPRs. The Army independent evaluators, as well as cost and programmatic analyses from the MATDEV support the acquisition decision process. Sources of data for evaluations include the SLAD technical analyses, insensitive munition data bases, modeling and simulation, RDEC experimentation and studies, Test and Evaluation Command (TECOM) and contractor test reports, the AoA, studies on similar systems and existing data bases. The Director, Assessment and Evaluation (DA&E), OASA(ALT), provides assistance to the MATDEV in resolving survivability issues within the context of the overall systems effectiveness as reflected in the Integrated Program Summary (IPS). The DA&E assesses the program's survivability risk within the framework of the overall system performance assessment using input from the developmental independent evaluator and MATDEV in preparation for key milestone reviews at the DA/OSD level. The Deputy Under Secretary of the Army (Operations Research) ((DUSA(OR)) assesses the survivability findings and test results within the context of overall suitability and effectiveness. The Army Executive Agent for Insensitive Munition/ASA(ALT), assisted by DALA and the MVAP, assesses munition response to unplanned stimuli, and the resulting impact on system survivability.

8. Deviations and Waivers. The Assistant Secretary of the Army (Acquisition, Logistics and Technology) ((ASA(ALT)), Deputy Chief of Staff (Personnel) (DCSPER) (for soldier survivability) and the Deputy Chief of Staff (Operations and Plans) (DCSOPS) are joint approval authorities for waivers of survivability characteristics. The AAE approves waivers for munition survivability relative to insensitive munition/unplanned stimuli requirements. Waivers of the unplanned stimuli requirement of a munition are subsequently validated by the Joint Requirements Oversight Council (JROC), through the J-8 / Operational Requirements Branch. Additionally, the DCSOPS, per AR 15-41, serves as the sole approval authority for proposed modifications or waivers

to nuclear hardening criteria, NBC contamination survivability criteria, and related testing procedures for materiel used by the Army. The U.S. Army Nuclear and Chemical Agency (USANCA) has a special role in the waiver process for nuclear effects and NBC contamination survivability criteria, as described in AR 15-41. Current Army directives provide particular waiver chains for live fire test and evaluation, and software reprogramming of certain systems.

9. Survivability Sustainment. Survivability must be maintained throughout the system life cycle. Maintenance actions, replacement of parts, modifications and other life cycle changes trigger reassessment of system survivability and munition sensitivity. Parts must be replaced with others of equal survivability characteristics.

a. Life Cycle Surveillance and Maintenance. The MATDEV includes life cycle surveillance and maintenance of the system survivability features in the Supportability Strategy (SS). This plan ensures that survivability design features are adequately described in engineering drawings and design analysis reports, and ensures that the spares, replacement parts, sub-systems, components and re-procurement of systems are functional and have comparable or better survivability characteristics than the original parts. Specifically, for systems which incorporate hardening in order to meet the survivability requirements, detailed life cycle hardness assurance, maintenance, and surveillance (HAMS) programs are incorporated into the SS. These programs document design details of survivability features, identify the critical parts and processes and describe the cautions and procedures to be used during regular maintenance and repair to assure the survivability (for example, nuclear and NBC survivability) is maintained and verified in deployment.

b. Modification and Upgrade. The addition, removal, or replacement of materiel in a weapon system because of mission change, threat change, producibility, or cost considerations can significantly affect the survivability characteristics. For example, modifications are evaluated with respect to the overall survivability effect. Even if a modification directly increases one aspect of survivability (for example, conventional vulnerability), the other aspects (for example, signature or NBC) are addressed.

4.4.2 Work Breakdown Structure

Point of Contact: Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 103 Army Pentagon, ATTN: SAAL-ZD, Washington, DC 20310-0103

The Work Breakdown Structure (WBS) sets the foundation for describing materiel acquisition programs. The PM uses the WBS as the basis for developing a statement of work for a request for proposal. The WBS describes a time independent arrangement of program activities in a logical framework. It consists of work elements necessary to accomplish the program objectives. The WBS is terraced to form a matrix of activities, or work elements, at levels of decreasing systems complexity. The layering allows management to assess program progress toward quantifiable and measurable goals along a time line established in the acquisition baseline.

The WBS also provides a basis for contractor cost data reporting (CCDR) by giving it structure. The layers or matrix, allow managers to view accomplishments and costs to the lowest level of the WBS. Lower levels may exist, but only those that have been approved in the program WBS will appear in the CCDR plan. The WBS and CCDR are closely related documents. The WBS gives structure to a program while the CCDR describes cost data collection frequency and format for specific WBS elements.

Procedures for submitting and processing the WBS/CCDR once prepared by the PM are:

1. A WBS/CCDR Plan that is unique to the program is required for cost reimbursable contracts and procurement Firm Fixed Price contracts that were competitively awarded but where competitive conditions no longer exist. This WBS/CCDR Plan is developed by the PM/PEO in coordination with the Cost Performance Integrated Product Team (CPIPT) or the Cost Integrated Product Team (CIPT), as appropriate. Army Cost and Economic Analysis Center (CEAC) and OSD Cost Analysis Improvement Group (CAIG) are represented in this process as members of the CPIPT/CIPT. In coordination with CEAC, the CPIPT/CIPT will staff the WBS/CCDR Plan with the CCDR Project Office no later that 90 days before the industry solicitation.

2. CEAC (SFFM-CA-PA) reviews the WBS/CCDR Plan for adequacy as a basis for cost reporting.

3. The PM incorporates/resolves the CEAC comments and send the WBS/CCDR Plan through the IPT to the Deputy for Cost Analysis for review and Amy approval. Once Army approval is obtained, the WBS/CCDR Plan is sent to the OSD Cost Analysis Improvement Group (CAIG) for final approval at least 60 days prior to solicitation on ACAT I programs. The Deputy for Cost Analysis is the approving authority for ACAT II programs. The delegated Milestone Decision Authority (MDA) approves CCDR Plans for ACAT III and IV programs, with a copy furnished to CEAC.

4. Once approved, the PM requests the procurement contracting officer to incorporate the WBS/CCDR Plan into his solicitation.

5. After contract award, it may be necessary to amend the WBS/CCDR Plan in order to accommodate the more specific nature of the development. The PM should prepare a change request memorandum (no specified format) and forward it to CEAC for approval. For ACAT I programs, CEAC (SFFM-CA-PA) will review, comment (as required) and forward the PMs change request to the OSD CAIG for final approval. CEAC will approve ACAT II changes. Changes to ACAT III and IV plans will be approved by the MDA, with a copy furnished to CEAC.

4.4.3 Standardization Documentation (and Performance Specifications)

Points of contact:

Commander, U.S. Army Materiel Command, ATTN: AMCDCG-A, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001

Commander, U.S. Army Materiel Command, Deputy Chief of Staff for Research, Development, and Acquisition, ATTN: AMCRDA-TE, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001

References:

Federal Acquisition Regulation, Part 11, FAC 90-46.

Defense Federal Acquisition Regulation Supplement, Part 207, DAC 91-12.

DOD Manual 4120.3-M, “Defense Standardization Program (DSP) Policies and Procedures,” July 1993 as augmented by OSD policy memoranda.

MIL-STD-961D, “DoD Standard Practice Defense Specifications.”

MIL-STD-962C, “Defense Standards and Handbooks.”

“Army Implementation Plan for Blueprint for Change: Toward a National Production Base,” 23 November 1994.

DoD Handbook SD-15, “Performance Specification Guide.”

AMC-P 715-17, “Guide for the Preparation and Use of Performance Specifications.”

Standardization is an important consideration throughout the acquisition process. Properly applied, standardization can significantly reduce life cycle costs, schedules, and risks, while improving quality and logistic support. DoD Directive 5000.1, DoD Regulation 5000.2-R, the Federal Acquisition Regulation (FAR), and the Defense Federal Acquisition Regulation Supplement (DFARS) all require that standardization considerations be a part of the acquisition process.

The policies and procedures for the Defense Standardization Program (DSP) are described in the DSP Manual (DoD 4120.3-M) and several policy memorandums issued by the Office of the Secretary of Defense. These memorandums are available through the World Wide Web on the Defense Standardization Program Office Home Page (http://www.dsp.dla.mil/). The DSP Manual is authorized by DoD Regulation 5000.2-R and is mandatory for use by all DoD Components. The manual is designed for direct use by the operating levels. As with all requirements, users must properly apply and tailor standardization requirements to achieve maximum benefits.

Comprehensive guidance and instructions for implementing this new approach to acquisition is contained in the “Army Implementation Plan for Blueprint for Change: Toward a National Production Base.” Additional guidance on the preparation and application of performance based requirements may be found in SD-15 and AMC P 715-17. Extension of the reform initiatives to apply to all re-procurements is the most notable difference between the Army's implementation and that of other Services.

The objectives of the Army's focus on performance based requirements are:

1. To encourage and facilitate the replacement of obsolete technology by inserting newer, more capable technologies;

2. To integrate military and commercial industrial bases;

3. To reduce life cycle costs of defense systems and materiel; and

4. To eliminate non-value added requirements that are not essential to the design and/or production of an item.

Within the Army, the Defense Standardization Program (DSP) is the vehicle for standardizing materials, parts, items, components, equipment, subsystems, processes, and engineering practices and procedures essential to the design, development, production, inspection, application, and delivery of items of supply. The objectives of the Army's Standardization Program are to:

1. Institutionalize the use of performance based requirements;
2. Improve the Army's operational readiness;
3. Conserve money, manpower, time, facilities, and natural resources;
4. Improve the quality, reliability, maintainability, and safety of weapon systems and items of supply;
5. Improve the logistics support of weapons systems by reducing the variety of items of supply;
6. Enhance the interchange and interoperability of equipment and supplies within the Army and with the other military departments and the defense agencies;
7. Enhance the interoperability of U.S. and allied military equipment and supplies;
8. Promote competition;
9. Improve communications and reduce misunderstandings between DoD and industry and between customers and suppliers;
10. Plan and accelerate the insertion of new technology into systems and equipment;
11. Sustain and improve the industrial and technology base; and
12. Establish uniform requirements for the design, construction and maintenance of military installations, facilities, and civil works.

It is Army policy to use commercial products, practices, and procedures to the maximum extent possible. This practice reduces unnecessary overhead and reduces costs. In addition, it relies on the commercial marketplace as our industrial base.

Use of performance based requirements affect most elements of the acquisition process. Their use affects both new and existing programs, at all program acquisition milestones, and for all acquisition categories. Performance based requirements have numerous impacts on acquisition processes. Among them are:

1. The Government, for the purpose of describing the product the Government desires to procure and the business arrangements, prepares solicitations; including schedules, Government/industry management methods, and legally imposed contract provisions. Performance based requirements dictate that the product's performance requirements describe what the product must be capable of doing, not how to design and produce the product. It encourages contractors to propose design and manufacturing solutions that use commercial products and processes and result in lower costs. Solicitations using performance-based requirements reduce Government oversight by relying on high level metrics to assess progress and contract performance. Reduced government oversight is also achieved by use of Government and industry integrated product teams that provide continuous communication and agreement among all parties.
2. Performance based requirements places emphasis on past performance by requiring that contractor's performance on related and recent contracts be included as a significant evaluation factor during source selection.
3. Performance based requirements require that government control of the product's configuration be elevated within the system's structure so that performance is defined and documented at levels consistent with maintenance planning. This change allows the contractor greater flexibility and encourages innovation, cost reduction and technology insertion.

Army organizations with standardization activities are:

1. The U.S. Army Materiel Command (AMC), Deputy Chief of Staff for Research, Development, and Acquisition, AMCRDA-TE, administers and monitors the Army portion of the DSP.
2. The Army Standards Improvement Executive (SIE), HQ AMC, AMCDCG-A:
   a. Serves on the Defense Standards Improvement Council.
   b. Assists in the development of DSP policies and procedures.
   c. Provides oversight of DSP policy and procedures in the Army.
3. The Army Departmental Standardization Office (DepSO), HQ AMC, AMCRDA-TE:
   a. Plans, directs, and monitors the DSP for Army.
   b. Ensures the implementation of the DSP policies and procedures.

c. Assigns standardization responsibilities.

d. Designates Lead Standardization Activities (LSAs) and Standardization Management Activities (SMAs) (see SD-1) and ensures that they properly implement the policies, procedures, and goals of the DSP.

e. Provides the Army position on DSP policies, procedures, and guidance to OSD for consideration.

f. Submits standardization issues that require higher DoD-wide consideration to the Defense Standards Improvement Council.

g. Implements decisions of the Defense Standards Improvement Council.

h. Resolves standardization issues within the Army. Works with the other service DepSOs and OSD to resolve interdepartmental standardization issues.

i. Evaluates requests for the inclusion of qualification requirements in specifications, and if approved, submits analysis to OSD for final concurrence.

4. Standardization Executives (SEs) as listed in Standardization Directory 1 (SD-1):

a. Provide command/organizational level leadership and a focal point for standardization activities.

b. Ensure the implementation of the Army standardization program and its policies, procedures and initiatives within their organization.

c. Carry out the duties and responsibilities as described in their Charter.

5. Standardization Management Activities (SMAs) as listed in SD 1:

a. Manage and coordinate standardization efforts.

b. Implement the policies, procedures, and goals of the DSP.

c. Serve as focal point to answer standardization questions and resolve standardization problems.

Procedures relating to the Army LSAs and SMAs are identified in the DSP Manual (DoD Manual 41203-M). Procedures for applying and tailoring standardization documents are identified in the DSP Manual as augmented by OSD policy and guidance memorandums.

4.4.4 Metric System

Point of Contact: Director, Acquisition Policy (SAAL-RP), Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 2511 Jefferson Davis Highway, Arlington, VA 22202-3911.

4.4.5 Program Protection

Point of Contact: HQDA, Deputy Chief of Staff for Intelligence, 1000 Army Pentagon, ATTN: DAMI-CH, Washington, DC 20310-1000

References:
DOD Directive 5200.1-M, “Security, Intelligence, and Counterintelligence Support to Acquisition Program Protection.”
DOD Directive 5200.1, “DOD Information Security Program.”
DOD 5200.1-M, “Acquisition Systems Protection Program.”
DOD 5200.1-R, “Information Security Program.”
DOD Directive 5530.3, “International Agreements.”
AR 380-10, “Technology Transfer, Disclosure of Information and Contacts with Foreign Representatives.”

The purpose of this section is to provide procedural guidance for PMs to develop a program protection plan (PPP) as required by DoD 5000.2-R, part 4 (4.4.5) and DoDD 5200.1-M section D, paragraph 4, to submit requests for Matrix Security Support (MSS) and foreign intelligence collection threat assessments as part of the PPP development process, and to submit PPP documentation for milestone decision authority (MDA) review.

Program protection planning is the total, managerial approach to provide acquisition programs, projects, or products life-cycle protection against intelligence collection efforts and unauthorized disclosure.

Program protection planning applies to all acquisition programs—major, non-major, and Special Access Program (SAP).

DoDD 5200.1-M does not provide for waivers to the PPP process. However, common sense and consideration of resource scarcity must be applied to acquisition programs which can establish that no Critical Program Information (CPI) exist in a specific program. (The phrase CPI replaces the phrases Essential Program

Information, Technologies and Systems (EPITS).) MSS elements should be contacted to provide appropriate assistance to PMs who determine that a program has no CPI.

DoDD 5200.1-M, “Security, Intelligence, and Counterintelligence Support to Acquisition Program Protection,” governs the development of PPPs. Guidance and detailed procedures for developing the PPP are contained in the Defense Acquisition Deskbook (Acquisition Systems Protection Program Workbook) and DoD 5200.1-M. As a minimum, there are 11 steps/parts to a PPP, as follows:

1. Program/System Description. The program description should identify: the mission, military value, and expected operational parameters; the locations or facilities where, and time periods when, CPI, technologies, and systems will be stored, tested, or analyzed; unusual factors (such as Treaty Limited Items) that may serve to increase or decrease foreign intelligence interest in the program; and supported or supporting acquisition programs.

2. Development of a list of CPI to be protected. This list includes technologies and systems resident in a particular program, project, or product by the PM. CPIs are those elements of a program that must be protected from intelligence collection. They provide the critical technological edge or battlefield advantage to US forces employing the weapons system. CPI disclosure would allow a military adversary or economic competitor to kill, copy, counter, or severely impact a program to the extent that it would necessitate resource-intensive program changes in order to maintain the fielded system's battlefield advantage.

3. Identifying threats to CPI. This is accomplished through a Multidiscipline Counterintelligence (MDCI) Threat Assessment (TA) produced by the US Army Counterintelligence Center (ACIC). The ACIC requires 150-180 calendar days to produce the assessment, which primarily focuses on the CPI determined by the PM. The specificity of the MDCI TA will be largely dependent upon the specificity of the CPI (to include the relationship and criticality of the CPI to the battlefield effectiveness of the fielded system), identification of the location(s) where the CPI will be resident during the weapons system's or automated information system's (AISs) life cycle, and the identification of the nature/format(s) in which the CPI exist. (It is conceivable, as a result of information provided by ACIC as part of the assessment (specifically as it relates to the open-market availability of comparable foreign country weapons systems, application of similar technologies in foreign weapons systems development, etc.), that reevaluation of the desirability and feasibility of US efforts to protect that aspect of the program as the CPI is warranted.)

4. Determination of vulnerabilities of CPI to collection threats. This involves decomposition of the MDCI TA to determine whether any of the CPI, according to their location(s)/nature/format(s), are vulnerable or susceptible to intelligence collection. If susceptible to intelligence collection, then a review must be done of the security countermeasures available at those location(s) to determine if they are sufficient when properly implemented to mitigate or negate intelligence collection. Vulnerability to a specific threat is the susceptibility of information or technology, or an actual component of the system, to be lost to an identified foreign collector employing a particular collection method(s) and having the intent to collect on the system or technology. Where security countermeasures (SCMs) are insufficient, the CPI are vulnerable. Consequently, specific SCM upgrades must be identified to correct the vulnerability. Vulnerability assessments are the responsibility of the US Intelligence Community, with the PM providing input to this process.

5. Technology Assessment and Control Plan (TA/CP). TA/CPs are required in support of programs such as sales and co-production of military equipment involving the release of classified information to foreign governments. DoDD 5530.3 governs TA/CPs.

6. Classification Guides. The Security Classification Guide (SCG) is required by DoDD 5200.1 and is included as an annex to the PPP. See below for additional information on PPP annexes.

7. Countermeasures. The PM ensures the supporting counterintelligence and security element, which is responsible for countering the collection threat to the system(s), is kept up-to-date on changes to the CPI. The PM should also keep the US Intelligence Community aware of international technology transfer aspects (cooperative efforts, foreign military sales (FMS), commercial sales, etc.) of the program that impact the system, or technology within the system. Time- or event-phased countermeasures are developed and executed by the US Army intelligence and security organizations on behalf of the PM.

8. Identification of Protection Costs. Any additional resource cost requirements resulting from upgrading specific SCM to safeguard vulnerable CPI from the collection threat will be determined. Although, this is a PM responsibility, with assistance from the MSS element, counterintelligence (CI) and SCM support costs associated with program protection will come from Army intelligence and security programs.

9. Foreign Disclosure. DoDD 5230.11, DoDD 5230.20, and AR 380-10 govern disclosures of classified information to foreign persons or organizations in DoD acquisition programs. Delegation of Disclosure Authority Letter's (DDLs) are included as an annex to the PPP. DoDD 5230.11 provides the format for DDLs.

10. Foreign Sales and Co-production. When there is a potential for international cooperation in development and production and/or foreign military sales are anticipated, a TA/CP and DDL will be prepared IAW paragraph 3 below. The TA/CP must be completed before solicitations are released or commitments for foreign participation or foreign sales are made.

11. Follow-on support. Procedures for continual security awareness training and measuring its effectiveness should be included in the PPP. Methodologies for conducting Program Protection Surveys (PPSs) should also be covered. Details on PPSs are covered in the “Submittal of PPPs for MDA Review” paragraphs below.

Annexes to the PPP include an SCG, a Systems Security Management Plan (SSMP), a TA/CP, and a DDL.

1. The Security Classification Guide (SCG) should include a section focused solely on the CPI and specify in which acquisition phase(s) each CPI will be protected. This is security classification management by “time/event phasing.” The SCG should also include appropriate safeguarding controls for sensitive, unclassified information associated with the program.

2. The SSMP is a system design, contractor-deliverable plan, based on a Data Item Description (DID).

3. TA/CPs and DDLs are developed for all systems when international agreements are anticipated, i.e., foreign military sales or co-development/co-production initiatives. TA/CPs are sent to appropriate MDAs through international program channels for coordination and approval by HQDA (OASA(ALT)). DDLs are approved by HQDA (DAMI-CH).

The 902d Military Intelligence Group, US Army Intelligence and Security Command has been tasked to survey and assess the operational effectiveness of PM-developed PPPs. The purpose of these surveys is to ascertain:

1. Whether the acquisition program's CPI may already have been compromised, and, if not,

2. Whether the SCMs employed are sufficient to protect the acquisition program's CPI against the collection threat.

Requests For Matrix Security Support (MSS)

All PM-originated requests for MSS that cannot be satisfied by the MSS element should be routed through that MSS element to the MACOM MSS element. If necessary, the MACOM MSS element should further route the request to HQDA (DAMI-CH) or HQ, USAINSCOM (IAOPS-CI), as appropriate. MSS includes, but is not limited to, installation Foreign Intelligence Officer formulation of the Intelligence Production Requirement for the MDCI TA, decomposition of the MDCI TA, advice and assistance in developing specific SCM and resource costs to negate or mitigate the collection threat against vulnerable CPI, and review of PPPs at MDA review (ACAT III and IV) or prior to forwarding for higher echelon review (ACAT I and II).

Requests For Foreign Threat Assessments

MSS elements should submit MDCI TA requests for validation through the MACOM MSS element to HQ US Army Intelligence and Security Command (USAINSCOM), ATTN: Production Branch. A statement should be included in the request to the effect that the MDCI TA is needed to develop a PPP. The request should also include the ACAT level (I, II, III, or IV), and provide the date/MDA level for the program's next acquisition milestone. In addition, list each CPI and provide: the site location(s) (to include government, contractor/subs, and other) where that CPI will be resident during the program's life cycle; the nature/format(s) in which the CPI will exist; a specific description of the relationship of that CPI to the program and why that CPI is critical to the program, i.e., how that CPI provides a critical battlefield advantage to the fielded system; and an assessment of the impact to the program if that CPI is compromised.

Submittal of Program Protection Plans (PPPs) For Milestone Decision Authority Review

1. ACAT I and II: MSS elements should submit PPPs through the MACOM MSS element to HQDA (DAMI-CH) for review and recommendation for or against approval at the program's next MDA review. PPPs should arrive at HQDA (DAMI-CH) no less than 30 calendar days prior to MDA review. DAMI-CH participates in the pre-ASARC ad hoc working group process under the auspices of a DA Systems Coordinator (DASC) for each program. DAMI-CH will forward PPPs for ACAT ID programs to the DoD Acquisition Systems Protection Office (ASPO) for concurrent review/approval recommendation prior to ASARC/DAB.

2. ACAT III and IV: Unless otherwise designated, MDA review responsibility for ACAT III and IV programs resides with the cognizant PEO, or for MACOM-managed programs, with the MACOM-designated MDA official. The appropriate level MSS element should provide a review of the PPP and a recommendation for or against approval to the MDA for ACAT III and IV programs.

3. DAMI-CH and MSS elements will use the Acquisition Systems Protection Program Workbook and the Program Protection Plan Exit Criteria (Appendix to DoD 5200.1-M) when reviewing PPPs for adequacy and for formulating recommendations for or against approval at MDA review.

4.4.6 Information Assurance

Point of Contact: Director of Information Systems for Command, Control, and Communications (DISC4), ATTN: SAIS-PAC-I, 107 Army Pentagon, Washington, DC 20310-0107

References:
Joint Technical Architecture—Army (JTA-A), Section 6, available on the Internet at: http://arch-odisc4.army.mil/.
DoD Joint Technical Architecture, Section G.
DoD Goal Security Architecture (DGSA), Volume 6 of the TAFIM, Version 1.0, 1 August 1993
DoD Security Certification and Accreditation Process for Information Technology (DITSCAP)
AR 380-19, "Information Systems Security."

The System Security Management Plan (SSMP) appears to duplicate the System Security Authorization Agreement that is part of the new DoD Certification and Accreditation Process for Information Technology (DITSCAP).

The DITSCAP was developed to establish a standardized process, set of activities, general task descriptions, and management structure to verify, validate, implement and maintain the security posture of the DII throughout a system life cycle. The DITSCAP is currently being staffed among the Services. Anticipate that the procedures in this section will reflect the DITSCAP.

4.4.7 Electromagnetic Environmental Effects (E3) and Spectrum Management

Points of contact:
Army E3 Program — Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 103 Army Pentagon, ATTN: SAAL-ZD, Washington, DC 20310-0103.
Army Spectrum Management — Director of Information Systems Command, Control, Communications and Computers (DISC4), 107 Army Pentagon, ATTN: SAIS-PAS-M, Washington, DC 20310-0107.

References:
DoD Directive 3222.3, "Department of Defense Electromagnetic Compatibility Program (EMCP)."
DOD Directive 4650.1, "Management and Use of the Radio Frequency Spectrum."
OMB Circular A-11, "Preparation and Submission of Budget Estimates."
MIL-STD-464, "Department of Defense Interface Standard—Electromagnetic Environmental Effects for Systems.
AR 5-12, "Army Management of the Electromagnetic Spectrum."
DA Pamphlet 73-1, "Test and Evaluation in Support of Systems Acquisition."

This section describes the processes which acquisition personnel use to design, specify, test, evaluate, field, and maintain materiel systems which will accomplish their intended missions in their expected electromagnetic environments (EMEs) in peace and war. Information on probable system Electromagnetic Environmental Effects (E3) limitations is used to make informed judgments and trade-offs supporting systems design and modification decisions. (See DoD 5000.2-R, paragraph 4.4.7.)

E3 defines a broad area of diverse phenomena caused by the radiation of electromagnetic (EM) energy from threat, friendly and natural sources. E3 includes the effects of intentional EM radiation as well as unintentional EM radiation, either of which may be emitted from a threat or a friendly source. A system E3 program should address any potential degradation in performance, safety or reliability of the system in its EM environment during storage, transportation or operation. E3 can be categorized by the following five domains:

1. Electromagnetic interference (EMI) and electromagnetic compatibility (EMC)
   a. Via conducted emissions
   b. Via radiated emissions
2. Electromagnetic Radiation Hazards (EMRH or EMRADHAZ)

3. Electrostatic Discharge (ESD)
4. Lightning Effects (LE)
5. Electromagnetic pulse (nuclear, non-nuclear, or directed energy weapon generated)

All Army systems must be designed to operate within their expected EMEs without unacceptable mission or safety degradation. Requirements and criteria are determined for the domains listed above and the system is tested against these requirements and criteria to assure that it will operate in its EME. All materiel that is comprised of electronics or other elements that may be susceptible to EM radiation should incorporate E3 criteria, assessment, and testing in its acquisition program. The Army E3 Program makes use of existing acquisition policies and processes to enable the acquisition team to identify system limitations that would result from EM emissions, and take actions to reduce the adverse impact on mission accomplishment.

Waivers, deviations or relaxation of E3 criteria are subject to approval by the materiel developer (MATDEV). Any member of the acquisition team may propose a relaxation of criteria for compelling reasons. Only the E3 Requirements Board (defined below) can recommend that a relaxation of E3 criteria is appropriate. Adequate analyses and operational impacts must accompany any request for relaxation. Additionally, if the relaxation of criteria affects system safety, a System Safety Risk Assessment (SSRA) and Health Hazard Assessment (HHA) must be performed.

Applicability of E3

All acquisition programs are covered by the E3 Program, and, with few exceptions, require E3 consideration. Programs for which E3 consideration is not applicable are characterized by no reasonable expectation of susceptibility, for example, clothing and vehicle tires.

The MATDEV and CBTDEV have the primary responsibility to review requirements documents (Mission Need Statement (MNS), ORD, Critical Operation Issues and Criteria (COIC)) of new systems for E3 considerations. They assure that appropriate E3 language is included in acquisition documents when necessary. In particular, the CBTDEV has the earliest responsibility, prior to the establishment of an acquisition program and the selection of a MATDEV. The MATDEV introduces E3 considerations into market investigations to avoid inappropriate selection of a non-developmental item (CaNDI) acquisition strategy, and consequent hardening effort.

Engineering personnel of the activity providing matrix support to a MATDEV screen fielded and developmental systems for applicability of E3. Culling standards are developed locally, and generally seek to identify system elements that are potentially susceptible to EM energy. Similar systems within a commodity—families of systems—will generally be grouped together for efficient use of resources, particularly for non-major and non-PEO systems.

The program also includes fielded systems found to have E3 at any time in the life cycle. (The absence of observed effects is not always a valid reason for exclusion.) The MATDEV and CBTDEV work together to find/fix combat deficiencies, and plan to reconsider the applicability of E3 in future materiel changes, threat changes, or mission changes.

CaNDI comply with the E3 program by early incorporation of mission area generic E3 criteria in market investigations. Where possible, criteria should make use of commercial standards. When E3 is assessed to present an unacceptable risk to a CaNDI, another acquisition strategy will usually be more cost effective. While a CaNDI strategy may not incorporate E3 modifications, E3 criteria would be included in the system baseline.

Army materiel acquisition programs incorporate E3 by means of an E3 Requirements Board. The E3 program is executed at the lowest effective organizational level in the acquisition structure, consistent with accomplishment of the program objectives.

E3 Requirements Board (E3 RB)

An E3 RB for a program is composed of representatives of the MATDEV, CBTDEV (or user), and the appropriate Army Materiel Command (AMC) organization which chairs the E3 RB and provides matrix engineering support. Experts from other Army organizations are called upon when necessary to support the members of the E3 RB. In particular, the independent evaluator and representatives of the test community are valuable adjuncts to the board. The E3 RB is not a decision-making authority: it makes recommendations to the MATDEV for execution.

The E3 RB identifies the range of expected EMEs (including the most stressful) to be encountered. It establishes the E3 criteria necessary for the system to operate without degradation in those environments. The E3 RB reviews the mission, performs a risk level trade-off analysis, and evaluates how the system meets E3

criteria. E3 RB documentation consists of conclusions and recommendations to the MATDEV, including determinations of the system's compliance with the E3 criteria, even where unresolved issues remain.

Each commodity develops a board charter and procedures, initiates meetings, and resolves other operational details to best suit local processes and conditions. E3 requirements board meet as necessary to accomplish their function. Groups, or families, of systems may be served by common E3 RBs, which may be standing boards within commodity or mission areas.

Criteria Determination

A comprehensive understanding of the intended operational environments the system encounters is key to fielding an effective system. Early introduction of E3 requirements reduces cost and disruption by causing the use of design features that enhance E3 performance and minimizing costly hardening late in the program. In deciding the E3 criteria, the E3 RB uses mission and risk analyses and tests. It balances the system concepts, architecture, user requirements, and available design capabilities against anticipated threat and environment.

1. E3 criteria. The E3 criteria denote the portions of the expected EME in which the system must perform without unacceptable mission degradation. The E3 RB (with advisory technical experts) uses generic E3 criteria for initial screening to consider the impact on the proposed system, as early in the process as possible. Generic criteria are mission-area-based sets of EME specifications that include environments that the materiel class is normally expected to experience. The E3 RB develops and maintains system unique E3 criteria (tailored for the system) based on the generic criteria, the anticipated mission, training, transport and storage environments for the system, specific threat(s) or environmental factors, and other pertinent considerations. System E3 criteria are critical system characteristics, representing the minimum threshold of EME requirements.

2. Criteria relaxation.

a. Relaxation of E3 criteria may be considered for approval by the MATDEV or his designated subordinate if an overriding benefit to the government can be shown. Any member of the acquisition team may propose a request for relaxation. Only the E3 RB can recommend to the MATDEV that a relaxation of E3 criteria is appropriate.

b. A request for relaxation (for compelling cause), supported by pertinent technical analysis, may be proposed to the E3 RB for adjudication and validation. The board and its technical experts are responsible for analyzing the mission and safety impact of the proposed relaxation of E3 criteria. A System Safety Risk Assessment (SSRA) and Health Hazard Assessment (HHA) are also required if the relaxation is judged to affect safety. Any E3 induced inadequacy resulting from relaxation of criteria is assessed for likelihood (probability of occurrence) and impact severity, is documented by the E3 RB, and provided to the MDA. Relaxation of the E3 criteria may be recommended to the MATDEV under certain operational conditions, or when proliferation of the system provides sufficient redundancy to overcome E3.

c. The MATDEV or his designated subordinate endorses any relaxation of criteria, and the supporting assessment. The MATDEV is also responsible for publishing security classification guidance for E3 deficiencies. E3 criteria relaxation is coordinated with the user community, as it constitutes a change of critical system characteristics. Any concerns raised by the E3 RB due to relaxation of criteria, not resolved at the working level, are submitted by the E3 RB directly to ASA(ALT), Director for Assessment and Evaluation: SAAL-ZD.

3. ORD-to-RFP crosswalk. The MATDEV may help the CBTDEV in developing operational requirements documents. Together, they compare the resulting acquisition program baseline and specifications (used as the basis of the statement of work in the request for proposal) for consistency. This process assures that E3 requirements are translated into well-defined specifications.

4. Coordination. E3 RB members from all programs under a matrix support organization should meet periodically to review and resolve common issues concerning the Army E3 policy, criteria, E3 RB charters, and processes. Continuity of process, policy and personnel will enhance program effectiveness.

5. Criteria changes. The E3 RB meets whenever there may be a need to readdress and change the system E3 criteria, throughout the life cycle of the system. There are three events that cause the E3 RB to reconvene as a review board and evaluate the impact on mission accomplishment: modifications; changes in mission; or, changes in threat, friendly or natural emission. New or revised E3 criteria are then produced as appropriate.

Assessment and Trade-Off Analyses

The E3 RB is the best forum to review mission and hardening level trade-off analyses, evaluate the feasibility of meeting the E3 criteria, and submit findings and recommendations to the MATDEV. Technical experts supporting the E3 RB normally perform analyses. E3 problems found in fielded systems may require consideration as new combat deficiencies. The board chair is responsible for documenting and retaining findings as proceedings of the E3 RB.

1. Minor effects. Some effects may be assessed to be minor in their impact on safety and/or mission accomplishment, inflicting negligible risk. Users may be trained to understand and not react to such effects. If the E3 RB finds a risk acceptable, for whatever reason, the risk is documented by the E3 RB, endorsed by the MATDEV, and promulgated throughout the user community. CaNDI acquisitions may tolerate minor effects that introduce negligible risk.

2. Safety impact. Consequences affecting safety must be evaluated for severity and probability of occurrence, consistent with regulatory guidance. Appropriate hardening may be incorporated in system design to resolve any such defect. The supporting safety office and the US Army Safety Center should assist the E3 RB in assessing the acceptability of safety risk. Acceptable safety risks are documented by the E3 RB, endorsed by the MATDEV, and promulgated throughout the user community.

3. Mitigation of effects. A technical or operational fix may be required as an outcome of the identification of unacceptable E3 risk. The MATDEV, through the E3 RB, may incorporate hardening measures, or redesign parts of the system to increase hardness. The user may be requested to reevaluate the mission in light of the impact of E3 on mission success. In that case, exclusionary areas of operations may be designated. The concept of deployment may be modified to reduce the reliance on the potentially vulnerable system.

4. E3 threat assessment. Electronic warfare (EW) and electronic countermeasures (ECM, or jamming) are doctrinally defined as the deliberate radiation, re-radiation, or reflection of EM energy for the purpose of disrupting enemy use of electronic devices, equipment, or systems. The E3 originating from deliberate hostile sources is addressed by the CBTDEV and MATDEV in the System Threat Assessment Report (STAR), and is part of the system survivability analysis process. The effects of either friendly (fratricidal) or hostile (collateral) EW are part of E3, and are addressed in the E3 criteria, as appropriate. Hardening, or other form of EW or ECM mitigation, is treated as part of E3 mitigation.

Program Planning

The MATDEV and matrix support organizations generally enact a memorandum of understanding, or equivalent, defining E3 support to programs and ensuring adequate funding by the MATDEV. The MATDEV executes the E3 program for the system, and is responsible for definition of the expected EME, conduct and review of E3 analysis, and scheduling of system testing based upon the environment. The MATDEV establishes a life cycle control process to ensure that the system meets its E3 criteria and that the system continues to operate in its expected EME. These factors are integrated into an E3 program plan.

1. The policies of the E3 program apply to systems acquired under all acquisition strategies including non-developmental and urgent procurements. E3 applies to all classes of materiel, including special operations and classified programs. Joint programs require coordination of E3 criteria to ensure that Army policy is followed.

2. E3 is a consideration at all milestone reviews, for all acquisition categories. The E3 RB for the system assists the MATDEV in preparation for the milestone reviews. Examples of items to be considered at acquisition reviews, in addition to requirements criteria, are:

a. Key program dates;

b. Status of all E3 in related program plans (EMI/EMC Control Plan, ILS Plan);

c. Status of test and evaluation for E3;

d. Status of existing or planned E3 related working groups, such as a T&E IPT E3 sub-group;

e. Need dates for outputs of E3 related efforts;

f. Schedules and responsibilities for E3 RB activities; and others.

3. E3 is included in, and generally follows the procedures for review of Survivability, Lethality, and Vulnerability issues. (See paragraph 4.4.1—Survivability.)

Spectrum Management

Each Army system that intentionally radiates radio frequency energy must comply with national and international policies and procedures for frequency management. These systems are termed spectrum depend-

ent. The system must be designed so that its use of the frequency spectrum complies with all regulations and standards. This applies to all systems acquired under any acquisition strategy, including non-developmental and commercial equipment, at any level of classification or access. Current DoD regulations, specifically DoD 5000.2-R require the determination of spectrum supportability prior to initiating cost estimates for development or procurement.

Conceptual spectrum dependent systems will coordinate their requirements for tactical equipment with HQ, TRADOCs Spectrum Manager. MATDEVs obtain frequency management guidance and supportability prior to milestone 0 from the Army Spectrum Manager. Spectrum dependent systems must obtain spectrum certification supportability, using DD Form 1494, through the Army Spectrum Manager. The Army frequency management process and requirements for obtaining frequency supportability are described in AR 5-12.

Spectrum supportability is location specific and must be obtained through the Army Spectrum Manager for all prospective U.S. and host nation locations.

1. All nations share the electromagnetic spectrum and reserve their sovereign rights to its use. The International Telecommunication (ITU) Radio Regulation and international agreements such as international aviation agreements, North Atlantic Treaty Organization (NATO) agreements can affect operation of equipment in various parts of the world. Development of proposed new systems, which are to be fielded Army-wide, requires extensive negotiation with other US government departments and with host nation authorities through established treaties and agreements and can take several months to complete such negotiations.

2. To save time and resources, preliminary frequency supportability assessments are to be conducted as soon as practicable under AR 5-12 to determine if the proposed equipment will meet spectrum supportability and EMC in its intended operating environment. These assessments can take from 3-9 months to perform.

Test and Evaluation

E3 test and evaluation is performed under the purview of an Army tester and an independent evaluator on samples of each system required to have E3 criteria. Analysis is used to assess the probable inter-system and intra-system E3 hardness, as well as provide guidance and theoretical pretest predictions. DA PAM 73-4, Developmental Test and Evaluation Guidelines, provides detail.

The intent of the E3 program is to fully integrate E3 test and evaluation (T&E) into the normal cycle of T&E. If a system is found by analysis to be particularly susceptible to E3, then accelerated or expanded testing is called for. The E3 RB assists the MATDEV by reviewing and commenting on E3 analyses, control plans, test plans, test procedures, and test reports. The E3 RB provides input to the independent evaluator for test and evaluation, and may provide a member to the survivability sub-group of the T&E IPT.

Life Cycle Surveillance and Maintenance

The MATDEV includes life cycle surveillance and maintenance of E3 features in the Integrated Logistics Support (ILS) planning. Using, maintaining, and testing organizations periodically reassess system E3 performance characteristics. Emphasis is placed on acquiring a system hardware design that loses E3 hardness in a gradual manner (graceful degradation) rather than all at once. Additionally, system hardware design should favor E3 features that may be monitored at the lowest operational level, and be renewable at the lowest possible maintenance level.

Systems which incorporate shielding or hardening devices in order to meet E3 criteria should have life cycle hardness assurance, maintenance, and surveillance (HAMS) programs incorporated in ILS.

Procurement of spares, replacement parts, sub-systems, components, and re-procurements of systems also incorporate the provisions of this section.

4.4.8 Unplanned Stimuli*

Points of contact:

Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), Army Executive Agent for Insensitive Munition, 103 Army Pentagon, ATTN: SAAL-ZCA, Washington, DC 20310-0103

U.S. Army Defense Logistics Ammunition Activity, ATTN: AMSTA-AR-AL, Picatinny Arsenal, NJ 07806-5000

References:

Army Acquisition Executive, Directive Dated October 22, 1996, Subject: Munitions Survivability Requirements for the Design and Procurement of New or Modified Ammunition/Weapons.

Army Executive Agent for Insensitive Munition, Guidance dated January 17, 1997, Subject: Munitions Survivability Requirements for the Design and Procurement of New or Modified Ammunition/Weapons.
AR 71-9, “Materiel Requirements.”
CJCSI 3170.01, “Requirement Generation System Policies and Procedures.”

* Information contained in corresponding paragraph of DoD 5000.2-R is not applicable to ACAT IA programs.

This section provides an overview for munition developers regarding responsibilities for planning and executing the Army Insensitive Munition (IM) Program.

The reactive nature of munitions makes them susceptible to degradation and destruction when exposed to stimuli such as fragment and fires. These reactions may cause significant damage or injury to weapons, crews, equipment, and storage and transportation systems. An insensitive munition will enhance system survivability by minimizing the likelihood and extent of potential damage resulting from unplanned munition reactions.

DOD policy was further clarified by the Army Acquisition Executive's directive on October 22,1996. This directive instructed all munition developers to apply survivability design features and materials in munitions, and integrate such into program planning and execution. The directive also instructed the Army Executive Agent for Insensitive Munitions (AEA-IM) to develop procedures to execute this mandate. This includes establishment of regulations and guidance, and assistance to material and combat developers in achieving munition/weapon systems that can withstand unplanned stimuli in compliance with the DOD regulation. The AEA-IM has assigned responsibility for IM technology implementation to the TACOM-ARDEC Defense Ammunition Logistic Activity (DALA). The Munition Vulnerability Assessment Panel (MVAP) provides technical assessments of IM program compliance with PMs and the acquisition community. DALA, in conjunction the MVAP, recommends the acceptability of a request for waiver to Unplanned Stimuli to the AEA-IM.

The goal of the insensitive munition is to reduce the likelihood of violence or reactions of munitions that are exposed to unplanned stimuli, in order to enhance survivability. Design features are developed and introduced through a total system engineering approach to obtain munitions that address the unplanned stimuli requirement and meet all combat/logistical system requirements.

To achieve uniform procedures and implementation instructions, Appendix XXV covers the IM technical approaches, IM in acquisition milestones, and IM test and evaluation guidelines, and waiver process.

4.4.9 Value Engineering

Points of contact:

Office of the Chief of the Chief of Staff, Army, ATTN: DACS-DMC-P, Crystal Square 2, Suite 1001, 1725 Jefferson Davis Hwy, Arlington, VA 22202
U.S. Army Materiel Systems Analysis Activity ATTN: AMXSY-T Rock Island, IL 61299-7260

References:

Public Law 104-106, National Defense Authorization Act for Fiscal Year 1996, Section 4306, “Value Engineering for Federal Agencies.”
OMB Circular A-131, “Value Engineering.”
AR 5-4, “Department of the Army Productivity Improvement Program (DAMRIP).”
Federal Acquisition Regulation PART 48—”Value Engineering.”
Federal Acquisition Regulation PART 52, clause 52.248-1, “Value Engineering.”

This section provides general guidance to the Army for the implementation of Value Engineering (VE) on projects and programs as required by Public Law 104-106, Section 4306, OMB Circular A-131, Value Engineering, and AR 5-4, Value Engineering Program.

The VE methodology is applicable throughout the life cycle of a system. VE should be started as early as possible (for example before design release) in order to minimize cost and provide maximum savings potential. VE efforts are most productive when VE personnel serve as members of Integrated Product Teams (IPTs) so input can be provided throughout the decision making process.

Contractual VE, as set forth in the FAR Part 52.248-1, provides little or no incentive for the contractor to do VE early in the life cycle. The PM should link VE to the design-to-cost targets or other measurable goals with incentives to effectively motivate the contractor. The VE methodology should be used to achieve design to cost targets. The award fee arrangement should be structured so that the contractor can receive more fee for exceeding the design to cost targets through the VE methodology.

The FAR, Part 48.102, requires broad use of VE by numerous agencies in various forms of contracts. There are two types of VE contract clauses. The VE Incentive (VEI) clause entitles the contractor to a share of the savings resulting from accepted proposals that the contractor initiates on a voluntary basis. The second clause is the VE Program Requirements (VEPR) clause that requires the contractor to undertake a specified VE program as a contract line item. A class deviation approved for a 2-year period ending 30 June 1999, or until the FAR is revised, is in effect to allow flexibility in sharing periods and sharing rates.

The use of performance specifications makes it more difficult to identify Value Engineering Change Proposals (VECPs) because the Government does not control the detailed design specifications. However, a proposal that requires a change to the contract to implement and produces a life cycle cost savings is still the basis for a valid VECP, so the basic philosophy has not changed. Information on VE contractual language and the use of VE with performance specifications is being developed. The AMSAA point of contact identified above should be contacted for the latest information on the use of VE with performance specifications.

The prime benefiting program(s) will bear the cost of the VE effort and should identify funds for this investment and share in the monetary returns on the investment in the VE action.

Organizations should assure that personnel assigned to manage and execute the VE program have had training in the VE methodology and execution of the VE clauses. There is a Value Engineering Manager (VEM) at most Major Commands and Subordinate Commands to provide information on VE training opportunities. The VEMs may also provide functional support to PEOs/PMs for various activities such as VE reporting.

Contractors and Government employees should be encouraged to use Value Engineering. Contractors should be encouraged to hold workshops to seek VE opportunities. Informational briefings or marketing materiel is available through the points of contact identified above.

4.4.10 Vertical Integration

Point of Contact: HQDA, ATTN: SAAL-ZP, Skyline 6, Suite 309, 5109 Leesburg Pike, Falls Church, VA 22041-3201

4.4.11 Special Coordination (This paragraph not present in DoD 5000.2-R.)

Point of Contact: Headquarters, U.S. Army Materiel Command, ATTN: AMCRDA-AP, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001

References:
DODD 1430.13, “Training Simulators and Devices.”
AR 750-43, “Army TMDE Program.”
AR 700-101, “Joint Operating Procedures, Management, and Standardization of Mobile Electric Power Generating Sources.”

This section provides a checkpoint for special coordination considerations that should be addressed during weapon system development. A quick look at specific subject areas is provided. The applicable subject areas should be examined and coordination established early in the acquisition process. The following paragraphs also identify organizations where special expertise is available to provide assistance to the MATDEV.

1. Night Vision, Electro-Optics, and Electronic Sensors. In order to capitalize on the Army's investments and focus efforts, CECOM Night Vision and Electronic Sensors Directorate should be included as an active member of the materiel development team on programs that employ the technologies of night vision and electro-optics, and electronic sensors. Point of contact is Director, Night Vision and Electronic Sensors Directorate, ATTN: AMSEL-RD-NV-D, 10221 Burbeck Road, Fort Belvoir, VA 22060-5806.

2. Standardization of Mobile Electric Power Generating Sets. In the interest of reducing operating and support costs, the Army is committed to the use of standard generators, auxiliary power units (APUs) and environmental control units to the maximum extent practical. In accordance with AAE Policy Memo 90-3, the MATDEVs of shelters and vehicle systems requiring these units should coordinate with PM Mobile Electric Power at the following address: DOD Project Manager-Mobile Electric Power, 7795 Cissna Road, Suite 200, Springfield, Virginia 22150-3199. Use of environmental control units (ENCORE) should also be coordinated with the Weapon System Manager for ENCORE at U.S. Communications-Electronics Command, ATTN: AMSEL-LC-CCS-G-EE, 10115 Gridley Road, Suite 228, Ft. Belvoir, VA 22060-5849. Coordination should be initiated early in the acquisition process, normally prior to Milestone I.

3. Training aids, devices, simulators and simulations (TADSS). All training devices supporting and unique to a major system acquisition should be documented and reviewed with the parent major system, and should be in place in time to support the introduction of those systems. Major system training devices should be identified in the acquisition process in the Integrated Program Summary (included in the Program Life Cycle Cost Estimate), in accordance with DODI 5000.2. Those training devices that are not included in a major

system acquisition should be identified and justified in relation to a specific training program or course. Per DODD 1430.13 the PM ensures that all development, procurement, operation, and support costs are programmed and funded. The MATDEV should initiate coordination early in the concept exploration and definition phase of the system with the U.S. Army Simulation Training and Instrumentation Command, ATTN: AMSTI-CA, 12350 Research Parkway, Orlando, FL 32826. The CBTDEV should coordinate with the U.S. Army Training Support Center, ATTN: ATIC-DM, Fort Eustis, VA 23604-5166.

4. Batteries. Maximum use should be made of standard, nomenclature batteries and battery charging systems to satisfy Army applications. Preference should be given to those batteries and battery charging systems that are available in the consumer marketplace, as opposed to those that have military only applications. Implementation of battery/battery charging system standardization, eliminating the proliferation of new configurations, and taking actions to reduce battery related operating and support costs should be supported by all activities subject to AR 70-1.

a. Life cycle costs related to the selection of a given battery chemistry/configuration should be considered when proposing a power source for an end item. Life cycle costs can be minimized by selecting a battery configuration available in the consumer marketplace, using standard, nomenclature, military batteries, using rechargeable batteries, and selecting a battery which has no hazardous/toxic materials. Reducing the operating and support costs related to the use of batteries should be a consideration in the design of all Army requirements that use any form of battery power. Examples of minimizing battery costs through end item design include using power management techniques, optimizing design to reduce power requirements, incorporating a battery state of charge technology, and designing in the capability to readily use external power sources such as those available from a vehicle.

b. The MATDEV should coordinate the requirement for the development, assignment, acquisition and usage of batteries and battery charging systems with the Army Materiel Command's Power sources Center of Excellence (PSCOE) at Commander, CECOM, ATTN: AMSEL-LC-BT, Fort Monmouth, NJ 07703, prior to each milestone review. PSCOE will further coordinate with other AMC/DA/DOD organizations.

c. PMs should coordinate system battery requirements with the PSCOE and obtain Army Acquisition Executive approval when a determination is made to use batteries other than those recommended by the PSCOE.

5. Explosive Ordnance Disposal (EOD). The Army PM is responsible to ensure that Explosive Ordnance Disposal (EOD) render safe and/or disposal procedures, publications, and tools and equipment are available for unexploded ordnance (UXO) including associated weapon systems: aircraft, remotely piloted vehicles, and combat vehicles. This also includes items that might be identified in accidents, incidents, or field usage as unexploded ordnance or bombs. Concurrent development of EOD procedures requires an IPT approach and provides full EOD operational support for all explosive ordnance items or systems. Concurrent EOD development also ensures availability to Joint Service (Army, Navy, Air Force, and Marine) EOD units 30 days before the materiel release or deployment date of new, modified or procured ordnance or ordnance systems. This satisfies the DOD Directive on explosive ordnance.

The MATDEV should initiate coordination early, in other words, during the preparation and development of Materiel Requirements Documents to ensure EOD technical information, validated and verified EOD Render Safe and Disposal Procedures, publications, and tools and equipment are available. The Army EOD Technology Division Office, located at TACOM-ARDEC, FSAC, ATTN; AMSTA-AR-FSX, Picatinny Arsenal, NJ, 07806-5000, will provide guidance and assistance to the proponent ordnance MATDEV concerning EOD concurrent development.

6. Test, Measurement, and Diagnostic Equipment (TMDE). Identification of requirements and acquisition of TMDE must be in line with the Army's standardization objectives. Those objectives are aimed at controlling the proliferation of system-specific test equipment, reducing operating and support costs, and providing modern and technologically capable equipment to support a wide range of Army test and diagnostic requirements. AR 750-43 provides guidance on requirements determination and selection of TMDE; requires use of standard automatic test equipment (ATE); establishes a waiver approval requirement for use of nonstandard test equipment; and addresses other TMDE considerations and requirements such as application of built-in test/built-in test equipment, test program sets, and calibration and repair. MATDEVs should coordinate TMDE requirements with the U.S. Army TMDE Activity (USATA) prior to Milestone I and continue coordination throughout the supported system's life cycle. Acquisition of TMDE and ATE by or for an Army activity should be coordinated with the USATA prior to processing of contractual requirements documentation. Point of contact is Director, U.S. Army TMDE Activity, ATTN: AMSAM-TMD, Redstone Arsenal, AL 35898-5400.

7. Army Heavy Metals Office. The Army Heavy Metals Office (HMO) is directly responsible to the Deputy Assistant Secretary of the Army for Plans, Programs & Policy (SAAL-RP), to ensure Army Heavy Metal decisions and actions are thoroughly coordinated, well planned and executed. The HMO is responsible for oversight of all life cycle aspects related to material selection to include life cycle issues (i.e., cost, material enhancement, Research & Development, production, testing, restoration, processing, storage, demilitarization) for metals such as beryllium, cobalt, depleted uranium, lead, molybdenum, nickel, tantalum, tungsten, and their alloys. This office will review all programmatic environmental, safety, and health (ESH) evaluations for all acquisition programs, utilizing the metals identified above. The HMO will then provide comments to the major milestone decision maker regarding the adequacy of the programmatic ESH evaluation. Accordingly, materiel developers should coordinate all heavy metal material use decision and issues with the Army Heavy Metals Office, ATTN: SAAL-RP, Building 1, Picatinny Arsenal, NJ 07806-5000.

8. Instrumentation, Targets and Threat Simulators. Authority of the Assistant Secretary of the Army for Acquisition, Logistics and Technology established the Project Manager for Instrumentation, Targets and Threat Simulators (PM ITTS). The PM ITTS mission is to ensure the U.S. Army has major instrumentation, targets and threat simulators required for test and evaluation. Inherent in this mission is to ensure that weapon systems under test can interface and function directly with the Army's Operational Test instrumentation. PM ITTS should be included as a member of the acquisition team, where requirements exist for major instrumentation, targets or threat simulators. Point of contact is the Project Manager for Instrumentation, Targets and Threat Simulators, ATTN: AMCPM-ITTS, 12350 Research Parkway, Orlando, FL 32826-3276.

9. Nuclear, Biological and Chemical (NBC) Defense. The Deputy Chief of Staff for Chemical/Biological Matters, Army Materiel Command/Commander, Chemical and Biological Defense Command is the Executive for NBC Defense Research, Development, and Acquisition (RDA) (non-medical). Because of the unique importance of providing defense against residual effects of NBC materials to all soldiers operating on the battlefield, the Executive for NBC Defense RDA was established to coordinate integration of NBC defense equipment and contamination survivability technologies across all major subordinate commands and program elements. A balance of NBC defense systems is needed to achieve the doctrinal goals for avoidance, protection and decontamination. Similarly, a balance of NBC technologies/materiel is needed to meet international and U.S. Army criteria for the elements of hardness, compatibility, and decontaminability of NBC contamination survivability mandated in the DoD 5000 series. MATDEVs can coordinate their design, development, and test, and evaluation efforts with the Executive for NBC Defense RDA to ensure adequate incorporation of NBC defense systems, technologies and their use in operational procedures. The Executive for NBC Defense RDA should participate in each major milestone review and also offers consultative assistance on NBC defense readiness and sustainment issues once the item is fielded. MATDEVs may initiate coordination by contacting the U.S. Army Chemical and Biological Defense Command, ATTN: AMSCB-EO, Aberdeen Proving Ground, MD 21010-5423.

Part 5
Program Assessments & Decision Reviews

5.1 Purpose

Point of Contact: Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 103 Army Pentagon, ATTN: SAAL-ZD, Washington, DC 20310-0103

The milestone review process is applicable to all materiel acquisition programs covered by DoDD 5000.1, DoD 5000.2R, and AR 70-1. The appropriate review forum for an acquisition program depends upon the program's acquisition category. There are three levels of program review:

1. The Defense Acquisition Board (DAB) is the primary forum used by Department of Defense (DoD) to make recommendations to the Defense Acquisition Executive for Acquisition Category (ACAT) ID programs. The DAB is supported by the DAB Readiness Meeting which is a pre-briefing to update the Under Secretary of Defense for Acquisition and Technology (USD (A&T)), Vice Chief of the Joint Chiefs of Staff (VCJCS), and others on the latest program status and outstanding issues.

2. Army Systems Acquisition Review Council (ASARC) is the senior Army review forum and ACAT ID, ACAT IC and ACAT II programs. The Army Acquisition Executive (AAE) convenes the ASARC at formal milestone decision reviews to provide information and develop recommendations for decisions. The ASARC is also convened to develop the Army's course of action on DoD major programs in preparation for the DAB review (in other words, ACAT ID programs). The Army also periodically convenes two other ASARCs; the Warfighting Rapid Acquisition Program (WRAP) ASARC to review programs/systems recommended for rapid acquisition based on successful Advanced Warfighting Experiments (AWEs) and the Fast Track ASARC for programs/systems recommended for rapid acquisition based on successful Advanced Technology Demonstrations (ATDs).

3. In Process Review (IPR) is the review body for ACAT III and ACAT IV programs. The IPR provides information and develops recommendations for decision by the appropriate Milestone Decision Authority (MDA).

Materiel acquisition program reviews are conducted at critical points and serve as forums to surface issues that must be resolved and to recommend appropriate action to the MDA. All system acquisition programs require a review at milestone decision points to evaluate program status and assess the program's readiness to proceed into the next acquisition phase. Other program reviews may be conducted at times other than milestone decision points when a significant and compelling program decision is required. (See Appendix XXIV—Preparation Guide for ASARC/Information Technology Overarching Integrated Product Team (IT OIPT) Acquisition Program Reviews.)

Major management decisions during the acquisition cycle are made at milestone decision points appropriate to the program. No single procedure can apply to the acquisition of all materiel systems.

The decision review process should support program stability. Stability in acquisition programs is essential to satisfying identified requirements in the most effective, efficient and timely manner. Accordingly, program funding and requirements changes should be minimized and not be introduced without assessing and considering their impact on the overall acquisition strategy and established program baseline. Affordability is a key consideration.

During the milestone review process, the MDA ensures that the views of all participating agencies are presented and considered. Disagreements between the PM and a supporting organization on the application of a functional requirement are resolved in accordance with AR 70-1.

The MDA may waive program documentation except that required by statute. The Materiel Developer's (MATDEVs) request for documentation waiver should include strong rationale/justification and be provided to the MDA for decision as early in the process as possible.

The objectives of milestone reviews are to:

1. Ensure that the Army is pursuing the most practicable path to correct or respond to a threat or operational deficiency with full appreciation of limited resources. Affordability and supportability, to include both materiel and manpower, will be constant and paramount considerations at each phase of the process.

2. Emphasize early life cycle planning for budgetary matters, operational and human performance, safety, corrosion prevention and control (CPC), training, supportability, transportability, procurement, producibility, and other driving forces to include, but not limited to, total life-cycle competition strategy and planning.

3. Focus deliberations on issues pertinent to the milestone and ensure the MDA has a balanced assessment of the program's readiness to proceed into the next acquisition phase.

4. Review the results of the system evaluation and, if necessary, the System Evaluation Report (SER) pertaining to the assessment of the systems progress towards achieving effectiveness, suitability, and survivability requirements for the milestone.

5. Provide the MDA accurate and timely program documentation and information to enable firm decisions and clear guidance.

6. Ensure sound tailoring of the acquisition strategy to meet the specific needs of an individual program.

MDA reviews may end in “paper ASARCs” when all program issues have been successfully resolved to the satisfaction of all parties. This decision is usually the outcome of the Military Deputy Review preceding the ASARC. The prospect of a “paper ASARC” does not relieve the PM of the responsibility for completing all supporting documentation.

5.2 Defense Acquisition Board

Point of Contact: Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 103 Army Pentagon, ATTN: SAAL-ZD, Washington, DC 20310-0103

General guidance on Army preparation for and participation in the DAB process is contained in Appendix XXIV—Preparation Guide for ASARC/IT OIPT Acquisition Program Reviews.

5.2.1 DAB Readiness Meeting

Point of Contact is the same as paragraph 5.2.

The DAB Readiness Meeting (DRM) is held approximately one week prior to the DAB review. Its purpose is to provide an update on program status and outstanding issues. Guidance on Army preparation for and participation in the DAB/DRM process, is contained in Appendix XXIV—Preparation Guide for ASARC/IT OIPT Acquisition Program Reviews.

5.2.2 Army Systems Acquisition Review Council (This paragraph is not present in DoD 5000.2-R.)

Point of Contact is the same as paragraph 5.2.

The ASARC is intended to provide a structured forum at which issues or Army interest requiring top-level considerations can be presented to the senior Army leadership. The issues presented, as well as the program decision needed, must be coordinated with the Army Secretariat, the Army Staff, other Services, and selected Major Commands (MACOMs) well in advance of the actual ASARC session. General guidance on Army preparation for and participation in the ASARC process is contained in Appendix XXIV—Preparation Guide for ASARC/IT OIPT Acquisition Program Reviews.

5.2.3 Warfighter Rapid Acquisition Program (WRAP) ASARC (This paragraph is not present in DoD 5000.2-R.)

Point of Contact is the same as paragraph 5.2.

Reference: AR 71-9, “Materiel Requirements,” April 30, 1997.

The WRAP ASARC is intended to provide a means for accelerated fielding of programs/systems that emerge from particularly successful AWEs, ATDs, ACTDs, or similar demonstrations and evaluations. The Training and Doctrine Command (TRADOC) Commander requests the Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA(ALT)) convene a WRAP ASARC to approve candidates based on a compelling experimental success and urgency of need. Approved programs may receive up to two years funding for operational prototypes. Subsequent resources will be based on Deputy Chief of Staff for Operations and Plans (DCSOPS) prioritization of TRADOC-approved warfighting requirements. For programs receiving funding through WRAP, the Project/Product Manager (PM) reports baseline parameters monthly to Headquarters (HQ), TRADOC. General guidance on Army preparation for and participation in the WRAP ASARC process is contained in Appendix XXI—WRAP.

5.2.4 Fast Track ASARC (This paragraph is not present in DoD 5000.2-R.)

Point of Contact is the same as paragraph 5.2.

The Fast Track ASARC is intended to provide a means for accelerated acquisition of very selective, high value, high priority technology developed within the Army Science and Technology program. The Fast Track process applies to a few selected technology demonstrations which, as a result of earlier efforts, appear to be sufficiently mature that:

1. They can be demonstrated during a 6.3 ATD program with moderate risk.

2. There is a reasonable likelihood of skipping the Program Definition and Risk Reduction (PDRR) Phase and transitioning directly to the Engineering and Manufacturing Development (EMD) Phase which is already funded in the Program Objective Memorandum (POM).

General guidance on Army preparation for and participation in the Fast Track ASARC process is contained in Appendix XXII—Fast Track Acquisition Program.

5.3 Reserved

5.4 Integrated Product Teams in the Oversight and Review Process

Point of Contact: U.S. Army Materiel Command, ATTN: AMCRDA-TE, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001

AR 70-1 and DoD 5000.2-R provide adequate guidance for ACAT I and II programs. The Milestone Decision Authority for ACAT III and IV programs have complete authority on how Overarching Integrated Product Teams (OIPTs) are established. OIPTs apply to programs approaching or beyond Milestone I in their life cycle.

5.4.1 Overarching IPT Procedures and Assessments

Point of Contact is the same as paragraph 5.4.

Reference: "Department of Defense Guide to Integrated Product and Process Development, Version 1.0," February 5, 1996.

The MDA for ACAT III and IV programs have complete authority on how OIPTs are established. OIPTs apply to programs approaching or beyond Milestone I in their life cycle.

The execution of the OIPT requirement for ACAT III and IV programs is at the discretion of the MATDEV. OIPTs could range from mirroring ACAT II programs to using established forums, such as an Executive Steering Committee. This decision should be based on the complexity of the program and made, as a minimum, in consultation with the Combat Developer (CBTDEV) and the PM.

5.4.2 Working-Level IPTs Procedures, Roles, and Responsibilities

Point of Contact is the same as paragraph 5.4.

Appendix XXIV—Preparation Guide for ASARC/IT OIPT Acquisition Program Reviews, the Defense Acquisition Deskbook (DAD), and AR 70-1 collectively provide a comprehensive description of the functions of the Army Working-Level IPTs (WIPTs).

For ACAT III and IV programs, the OIPT may reside with the major subordinate commander. For these non-major programs, WIPTs may not be necessary and the OIPT may elect to delegate the IPT hierarchical structures to the PM.

5.5 Joint Requirements Oversight Council Review Procedures

Point of Contact: HQDA, Deputy Chief of Staff for Operations and Plans, ATTN: DAMO-FDJ, 400 Army Pentagon, Washington, DC 20310-0400

References:
CJCSI 3170.01, "Requirement Generation System Policies and Procedures."
JROC Administrative Instructions, March 31, 1997.
AR 71-9, "Materiel Requirements."
TRADOC Pam 71-9, "Requirements Determination."

See referenced publications for information regarding Joint Requirements Oversight Review Council (JROC) procedures.

5.6 Cost Analysis Improvement Group Procedures*

Points of contact:
U.S. Army Cost and Economic Analysis Center (CEAC), ATTN: SFFM-CA-PA, 5611 Columbia Pike, Falls Church, Virginia 22041-5050.
U.S. Army Cost and Economic Analysis Center (CEAC), ATTN: SFFM-CA-CB (CRBSO), 5611 Columbia Pike, Falls Church, Virginia 22041-5050.

References:
DoD Directive 5000.4, "OSD Cost Analysis Improvement Group (CAIG)."

DoD 5000.4-M, “Cost Analysis Guidance and Procedures.”
AR 11-18, “The Cost and Economic Analysis Program.”
“Department of the Army Cost Analysis Manual,” July 1997, available on the Internet at: http://www.asafm.army.mil/ceac.htm..
“Department of the Army Economic Analysis Manual,” July 1995, available on the Internet at: http://www.asafm.army.mil/ceac.htm.

* Information contained in corresponding paragraph of DoD 5000.2-R is not applicable to ACAT IA programs.

The Assistant Secretary of the Army for Financial Management and Comptroller (ASA(FM&C)) formed the Army Cost Review Board (CRB) to review cost estimates for major weapon and information systems. This was in response to the need for a comprehensive Army Cost Position (ACP) acceptable to both the acquisition and financial management communities and to support the Planning, Programming, Budgeting and Execution System (PPBES). This chapter addresses these needs and is in keeping with the DoD 5000 series guidance dated March 15, 1996.

The ASA(FM&C) is responsible for approving the recommended ACP which is forwarded to the AAE and then briefed following the ASARC, IT OIPT, or DAB briefing patterns. The task of recommending an ACP falls on the CRB Chairperson who is the Principal Deputy ASA(FM&C). The CRB Chair exercises the Army's financial management control responsibility through the operation of the CRB. The CRB uses the IPT approach. This approach improves the quality of the ACP by bringing together experts from the acquisition, combat developments, financial management, and logistic communities. The membership of this board provides a broad range of Army perspectives and experiences required for making sound decisions. The CRB reviews major weapon and information systems at their critical acquisition decision points. All Army and Joint Army ACAT I programs and programs of special interest must have a recommended ACP briefed to the CRB.

The Cost Review Board consists of:

1. Principal Deputy, ASA(FM&C) is the Chairperson of the CRB.
2. Deputy for Cost Analysis ASA(FM&C) is the Non-Voting Secretary of the CRB.

And the principals from the following organizations:

3. Permanent Voting Members:
   - *a.* Deputy, Chief of Staff for Operations and Plans, Army Staff.
   - *b.* Deputy Director, Program Analysis & Evaluation Directorate, Army Staff.
   - *c.* Director, Assessment & Evaluation, ASA(ALT).
   - *d.* Deputy, for Plans, Programs, & Policy, ASA(ALT).
   - *e.* Vice Director, Information Systems for Command, Control, Communications and Computers (DISC4).
   - *f.* Assistant Deputy for Army Budget, ASA(FM&C).
   - *g.* Chief, Cost and Economic Analysis Division, Headquarters, Army Materiel Command.
   - *h.* Chief of Cost, Training & Doctrine Command.
   - *i.* Functional Proponent Representative (Information Systems only).
4. Ad Hoc, Non-Voting Members:
   - *a.* Representative from the systems Program Executive Office.
   - *b.* Other experts the CRB Chair deems necessary (such as the Office of the Secretary of Defense (OSD) Cost Analysis Improvement Group (CAIG) Analyst).

Figure 5-1 shows that the CRB principals are represented among the membership of a typical program Cost IPT.

Program Categories

1. ACAT ID Programs. The OSD CAIG develops an independent cost estimate (ICE) for ACAT ID programs as part of the DAB process. The CRB Executive Secretary may decide that it is in the Army's interest to perform some additional form of independent analysis based on the programs level of risk, maturity, cost growth, etc.

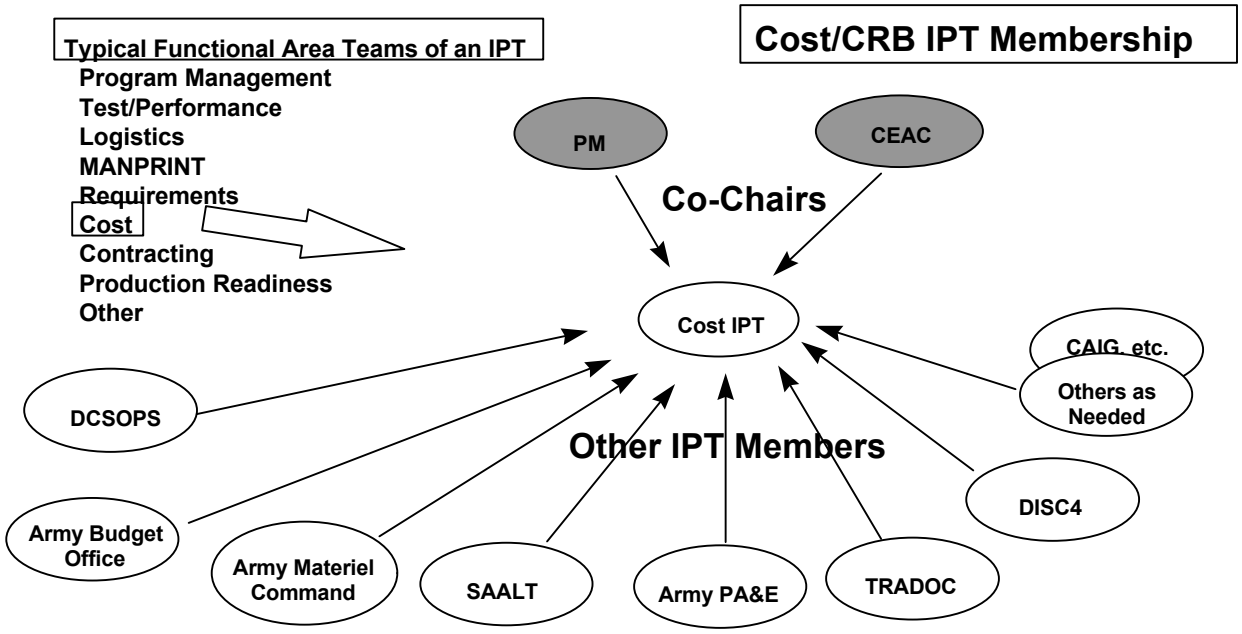


Figure 5-1. Membership Of The Cost/CRB IPT

2. ACAT IC Programs. OSD guidance states that the OSD CAIG, unless otherwise notified, delegate the development of the Independent Cost Estimate for ACAT IC programs to the component services. For Army ACAT IC programs, Cost and Economic Analysis Center (CEAC) develops the ICE for consideration during the ASARC process.

3. In either situation, the recommended ACP is provided to the ASA(FM&C) for approval. Figure 5-2 shows the recommended ACP process as a two-stage process. Stage I activities and products take place under the Cost IPT process, while stage II activities and products are part of the CRB IPT process. The members and leadership of both groups are essentially the same and the entire process can be referred to as the Cost/CRB IPT process with the understanding that stage I and stage II processes and products are different.

Program Reviews

1. ACAT ID Programs. The OSD CAIG performs an independent estimate that fulfills the statutory requirement for an independent cost and manpower estimate. However, as noted above, Army leadership may decide to do a Cost Component Analysis (CCA) for an ACAT ID program based on the program's level of risk and uncertainty. Therefore, for ACAT ID programs there are two options for the Cost/CRB IPT. If there are no risk and uncertainty issues with the program, the Cost IPT estimate may be sufficient for a recommended ACP. The Cost IPT co-chairs, in coordination with the CRB Support Office and the CRB Executive Secretary, make an initial and on-going assessment of program risk and uncertainty. Based upon the initial assessment or emerging issues, the Cost/CRB Co-chairs may recommend one of two involvement options for the CRB to the CRB Executive Secretary.

a. Option 1. CRB Executive Secretary decides that the program has no significant risk and the Cost/CRB IPT can go forward with the Cost IPT estimate. The Cost/CRB IPT then documents the estimate, does a risk analysis, and this becomes the recommended ACP. After this has been briefed to the CRB and any needed changes have been made, the ACP is forwarded to the ASA(FM&C) in the form of a Cost Analysis Brief (CAB). When this is approved by the ASA(FM&C) it becomes the ACP and can be used in the ASARC/DAB process. Under Option 1 the OSD CAIG analyst estimate fulfills the statutory requirement for an independent estimate.

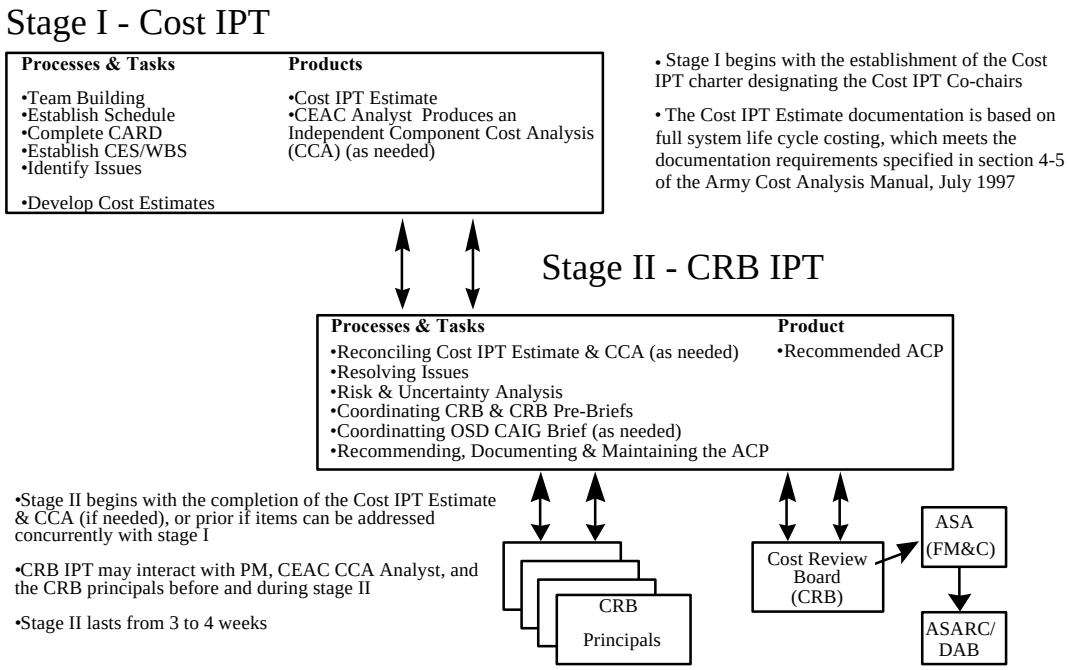


Figure 5-2. The ACP Process

b. Option 2. CRB Executive Secretary decides that the level of program risk and uncertainty warrant an independent Army review of portions, or all, of the Cost IPT estimate. This review is tailored to fit the situation. Figure 5-3 illustrates the options for ACAT ID programs.

2. ACAT IC Programs. Since the OSD CAIG delegates most independent estimates for ACAT IC programs to the Army, the CEAC Co-chair prepares an independent CCA to fulfill the statutory requirement. The CCA analyst employs the best current professional practice for that task. When comparing two estimates, they may incorporate in the recommended CCA, with or without adjustment, specific portions of the Cost IPT estimate, if it has independently established that the portions included are valid.

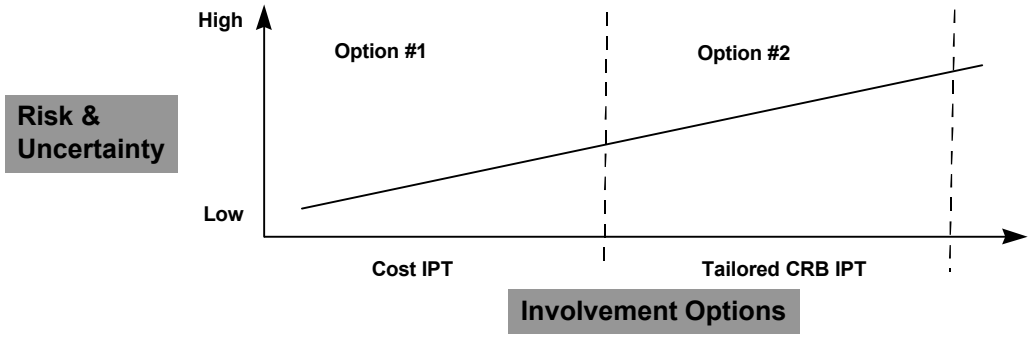
a. The decision to incorporate parts of the Cost IPT estimate is based on such evidence as follows:

(1) Current prices or realized costs;

(2) Cost incurred on similar programs; or

(3) Verification based on experience that the methods and data used in constructing the portion accepted are reasonable.

b. The CCA analyst will document the reasons for incorporation in its estimate of any portion of the Cost IPT estimate.



- Criteria for Determining CRB IPT Options for ACAT ID Programs
  - Cost & Technical Uncertainties
  - Program Cost Growth
  - Program Changes
  - Program Schedule Delays
  - Data Availability
  - AMC Validator, CAIG Analyst, or CRBWG Member Comments and Concerns
  - Stage in Life Cycle
  - Others ...?

Figure 5-3. Options for ACAT ID Programs

Preparation Of The Recommended ACP

The Cost/CRB IPT Co-chairs prepares the recommended ACP. In situations where there is one estimate (ACAT ID, Option 1), the Cost/CRB IPT documents the Cost IPT estimate in preparing the recommended ACP. In situations where there are two estimates (ACAT ID, Option 2, and ACAT IC), the Cost/CRB IPT reconciles the two estimates and develop a single, recommended ACP.

Cost/CRB IPT Issue Resolution Process

One of the criteria for the success of the Cost IPT and CRB IPT processes is that reasoned disagreement leads to a better overall product. Any disagreement should be discussed and resolved within the Cost IPT/CRB IPT whenever possible. However, there will be those instances when the disagreement cannot be resolved within this IPT. When the disagreement cannot be resolved within the IPT, the Co-chairs should inform the PM of the problem and possible solution(s). At the same time, the Staff Action Officers (AO) should inform their supervisor. The PM and Staff AOs supervisor should then try to resolve the problem. If a resolution is not possible, the Staff AOs supervisor should inform the CRB principal of the problem and possible solution(s). The CRB principal and the PM should then try to resolve the problem. If the problem still cannot be resolved, the PM should inform the Program Executive Officer (PEO) and the CRB principal should inform the CRB Chairman. The PEO and CRB Chairman should then try to resolve the problem. If the problem still exists, the CRB Chairman calls a special CRB meeting where the problem can be presented with possible solution(s). In most instances the CRB should be able to adjudicate a solution. In the rare instance where this is not possible, the ASA(FM&C) will adjudicate. The ASA(FM&C) is the designated decision authority for cost and financial matters. When issues need to be resolved outside the Cost IPT, all affected parties should keep their respective chains of command informed of the issue, possible solution(s), and steps being taken to resolve the issue. Figure 5-4 illustrates the process.

Documenting The ACP

The Cost/CRB IPT Co-chairs, with the assistance of the IPT members, produce the CAB. The CAB is the responsibility of the Cost/CRB IPT Co-chairs. The documentation produced by the Cost/CRB IPT (in the Automated Cost Estimating Integrated Tools (ACEIT)) is the basis for information contained in the CAB. Any remaining unresolved issues from the IPT process are raised at the appropriate point in the CAB. The package is not complete until any changes that arise from the CRB briefing are adequately addressed. When this package is completed, the Co-chairs signs the document and forward it to the ASA(FM&C) for approval of the

CAB containing the Army Cost Position (ACP). The Co-chairs maintain both paper and electronic copies of the approved CAB/ACP.

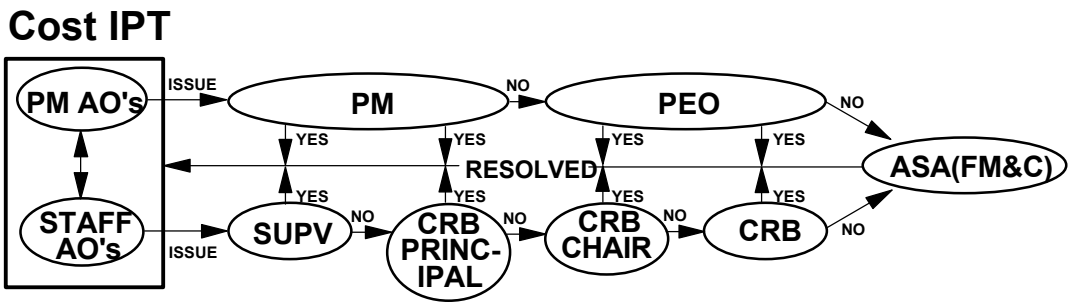


Figure 5-4. Issue Resolution Process

The major sections of the CAB are as follows: Executive Summary, Introduction, System Overview (Description and Schedules), Methodology Summary, Army Cost Position (Ground Rules and Assumption, Cost Comparisons (if needed for unresolved issues), and Funding), and Appendices (References and Others, as needed).

In addition to developing the CAB, the Cost/CRB IPT Co-chairs, with the assistance of the IPT members, brief the CRB on the results of their proceedings. The documentation produced by the Cost/CRB IPT (in ACEIT) is the basis for information contained in the briefing. Any remaining unresolved issues from the IPT process are raised at the appropriate point in the briefing. General format is as follows: Introduction of the Cost IPT members (and description of its proceedings), System Overview, Description of the Milestone Decision, System Quantities, Cost Element Summaries (prior & future), Cost Element Methodologies, Funding Status, Issues, and Recommendations. For option 2 (ACAT ID) and ACAT IC programs, a "Selected Cost Comparison" section is added below Methodology sections. Both sections address a proposed and an alternative response to the major issues in the program.

The CRB Support Office (CRBSO) has numerous CABs and some CRB briefing packages on file. They can provide advice and assistance to the Co-chairs on these documents. As the proponent for the Army's cost risk and uncertainty analysis efforts, the CRBSO can provide advice and assistance for that portion of the CAB and CRB briefing packages.

Procedures

AR 11-18 provides the policies and responsibilities for cost and economic analysis throughout the Army. The Department of the Army (DA) Cost Analysis Manual provides the framework for implementing the cost analysis policies set forth in AR 11-18. A DA Economic Analysis Manual provides the framework for implementing the economic analysis policies of AR 11-18.

5.7 Other Boards and Councils

Point of Contact: Director, Acquisition Policy (SAAL-RP), Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 2511 Jefferson Davis Highway (Suite 10036), Arlington, VA 22202-3911

5.8 Program Information

Point of Contact: Program Executive Officer, Intelligence, Electronic Warfare and Sensors, ATTN: SFAE-IEW&S, Fort Monmouth, NJ 07703-5000

Reference: "Department of Defense Guide to Integrated Product and Process Development," February 5, 1996.

Program Information is the minimum amount of information required by the MDA to make a balanced decision. Program information is divided into two categories:

1. Descriptive information—discretionary data.
2. Information requiring MDA approval—mandatory or statutory data.

ACAT I, ACAT IA, and ACAT II Acquisition Programs. These acquisition categories require the Defense Acquisition Executive (DAE) or the AAE approval to proceed to the next life cycle milestone. To support an Army decision, an ASARC is convened for these acquisition categories above. See Appendix XXIV—Preparation Guide for ASARC/IT OIPT Acquisition Program Reviews.

ACAT III AND ACAT IV Acquisition Programs. These acquisition programs require the PEO, MSC Commander, or Deputy for System Acquisition (DSA) approval to proceed to the next life cycle milestone. To support an Army decision, an IPR is convened for these acquisition categories above. The following is a guide to facilitate preparation of Army acquisition programs for review by the IPR and ultimate decision by the MDA (either PEO or MSC Commander).

1. Project/Product Managers can use similar documentation to the Modified Integrated Program Summary (MIPS) used for ASARCs and IT OIPTs. The MIPS is tailored to present program information needed by the milestone decision authority to understand the program and to make an informed decision.

2. A WIPT consisting of all of the program's stakeholders (PMs, user, testers, logistician, PEO etc.) develops the MIPS. The primary objective of this team is to submit a document to the MDA that is acceptable to every stakeholder. The WIPT leader is either the Project/Product Manager or project leader. In concept, each stakeholder has the authority to make decisions and be accountable for those decisions made during this process. Where agreement is not possible, residual issues are addressed to the OIPT for resolution before the decision IPR. If resolution cannot be obtained, issues are addressed to the MDA at the milestone decision IPR.

3. DoD 5000.1 directs that certain core issues be addressed at the appropriate milestone. While all programs must accomplish certain core activities, how these activities are accomplished is tailored to the specific ACAT III or IV program to provide only the required information to the MDA for his decision. In tailoring the MIPS documentation for the milestone decision, PMs, in coordination with the stakeholders, should ensure that the following four basic questions are answered before a Mission Needs Statement is written.

a. Is the system still needed?

b. Does the system work?

c. Are the major risks identified and manageable?

d. Is the system adequately funded?

4. In line with these questions, Figure 5-5 contains a series of thought provoking questions that will cause the PM to assess the acquisition program in a performance oriented fashion versus a prescribed format where information is plugged in and often redundant with other analyses. By contemplating these questions while creating the MIPS, the PM will have a standalone, streamlined decision document.

Core Acquisition Issues for Consideration During Modified Integrated Program Summary (MIPS) Preparation

Is the system still needed?

⇒ Why is the program needed?
⇒ Has the need been validated?
⇒ What specific capabilities are necessary?
⇒ When do the necessary capabilities need to be introduced to the field?

Does the system work?

⇒ Has the system been determined to be operationally effective, suitable, and survivable?
⇒ Has the stability of the design and the operational capability of the system been verified?
⇒ Have alternative solutions been reviewed and why was this solution selected?
⇒ Can the system or item be produced?

Are the major risks identified and manageable?

⇒ Has the system been determined to be operationally effective and suitable?
⇒ Have alternative solutions been reviewed and why was this solution selected?
⇒ What is the acquisition strategy to develop and/or produce the needed capability?
⇒ Is the system or item producible?
⇒ Can the system be trained?
⇒ How will the system be sustained?
⇒ How much will the program cost?
⇒ Has the program's risk been assessed?
⇒ What is the CAIV target for Average production Unit Cost and Average sustainment metric.
⇒ What are the environmental costs associated with this program throughout its life-cycle?
⇒ What are the exit criteria for moving into the next program phase?
⇒ Has an Explosive Ordnance Disposal (EOD) publication been developed, tested, and published for explosive ordnance (and for items that could be misidentified as explosive ordnance)?
⇒ Has an EOD publication been developed, tested, and published covering emergency ingress and downloading procedures for combat vehicles, remotely piloted vehicles, and aircraft?

Is the system adequately funded?

⇒ Can it be supported?
⇒ How much will the program cost?
⇒ Is the program affordable and fully funded?
⇒ Has a program baseline been developed to include Life Cycle Cost considerations?

Figure 5-5. Core Acquisition Issues For Consideration During Modified Integrated Program Summary (MIPS) Preparation

5. As the PM and WIPT create/tailor their acquisition program MIPS, it should encapsulate mandatory or statutory requirements gleaned from the following documents:

a. Operational Requirements Document (ORD), Systems Training Plan (STRAP), and Operational Mode Summary/Mission Profile (OMS/MP).

b. Analysis of Alternatives (AoA).

c. Test and Evaluation Master Plan (TEMP).

d. System Evaluation Report (SER).

e. Acquisition Program Baseline (APB).

f. Acquisition Strategy (AS).

g. Exit Criteria to proceed to the next milestone.

h. Program Life Cycle Costs.

6. As well, the MDA prescribes which discretionary descriptive information should be included into the MIPS:

a. Changes in warfighter Doctrine, Training, Leader Development, Organizational structure, Materiel, and Soldier (DTLOMS) caused by the system acquisition.

b. Army Technical Architecture (ATA) migration.

c. Defined risks/risk mitigation.

d. Cost as an Independent Variable (CAIV).

e. Program schedule.

f. Maintenance concept.

g. Cooperative/foreign opportunities.

h. Environmental impacts.

i. Manpower.

j. Affordability.

k. Corrosion Prevention and Control (CPC) Program.

l. Insensitive Munitions/Unplanned Stimuli Strategy and Assessment.

7. The PM obtains the Combat Developer's and all appropriate stakeholders signatures along with any letter concurrence from other stakeholders as appropriate on the MIPS before the MIPS is forwarded to the MDAs Staff and OIPT IPR members.

8. Prior to the scheduled IPR, the PM submits the MIPS with support documents to the PEO, MSC Commander, or DSA. An assessment of the program is made by an Overarching Integrated Product Team (OIPT) consisting of PM, Deputy PEO/Deputy MSC Commander, PEO Division Chiefs/MSC directors, and Operational Test and Evaluation Command (OPTEC) Operations Support Team (OST) Chair. Prior to the IPR, the decision package, with OIPT program assessment, is forwarded to the MDA. The Acquisition Decision Memorandum (ADM) documents the IPR decision and any additional guidance associated with the decision.

Part 6
Periodic Reporting

6.1 Purpose

Point of Contact: Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 103 Army Pentagon, ATTN: SAAL-ZD, Washington, DC 20301-0103

6.2 Cost, Schedule, and Performance Program Reports

Point of Contact is the same as paragraph 6.1.

6.2.1 Acquisition Program Baseline (APB) Reporting

Point of Contact is the same as paragraph 6.1.

For non-Acquisition Category (ACAT) I and non-ACAT IA programs, the Program Managers (PMs) maintains a current estimate of the program being executed in a format acceptable to the Milestone Decision Authority (MDA). The PM reports the current estimate to the MDA of each baseline parameter quarterly, or at a frequency determined by the MDA.

6.2.1.1 Program Deviations

Point of Contact is the same as paragraph 6.1.

In addition to the requirements of Department of Defense (DoD) 5000.2-R, the PMs of ACAT I and II programs, where the Army Acquisition Executive (AAE) is not the MDA, provide the AAE with the same program deviation reports that are provided to the MDA.

6.2.2 Defense Acquisition Executive Summary* (DAES) (DD-ACQ(Q) 1429)

Point of Contact is the same as paragraph 6.1.

6.2.2.1 DAES Reportable Designations

Point of Contact is the same as paragraph 6.1.

6.2.2.2 Out-of-Cycle DAES Reports

Point of Contact is the same as paragraph 6.1.

6.2.2.3 Consistency of Information with Other Documents and/or Reports

Point of Contact is the same as paragraph 6.1.

* Information contained in corresponding paragraph of DoD 5000.2-R is not applicable to ACAT 1A programs.

6.2.3 Major Automated Information System Quarterly Report* DD-C3I(Q) 1799

Point of Contact is the same as paragraph 6.1.

* Information contained in corresponding paragraph of DoD 5000.2-R is not applicable to ACAT I programs.

6.2.4 Selected Acquisition Reports* (SAR) DD-COMP (Q&A) 823

Point of Contact is the same as paragraph 6.1.

6.2.4.1 SAR Content and Submission

Point of Contact is the same as paragraph 6.1.

6.2.4.2 SAR Waivers

Point of Contact is the same as paragraph 6.1.

6.2.4.3 SAR Termination

Point of Contact is the same as paragraph 6.1.

* Information contained in corresponding paragraph of DoD 5000.2-R is not applicable to ACAT 1A programs.

6.2.5 Unit Cost Reports* (UCR) COMP (Q&AR) 1591

Point of Contact is the same as paragraph 6.1.

6.2.5.1 Unit Cost Content and Submission

Point of Contact is the same as paragraph 6.1.

6.2.5.2 UCR Breaches

Points of contact:
Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 103 Army Pentagon, ATTN: SAAL-ZD, Washington, DC 20301-0103
HQDA, ATTN: DACS-TE (TEMA), 200 Army Pentagon, Washington, DC 20310-0200

* Information contained in corresponding paragraph of DoD 5000.2-R is not applicable to ACAT 1A programs.

6.2.6 Annual T&E Oversight List

Point of Contact: HQDA, ATTN: DACS-TE (TEMA), 200 Army Pentagon, Washington, DC 20310-0200

6.2.7 Assessing Program Performance for ACAT I Programs*

Point of Contact is the same as paragraph 6.1.

* Information contained in corresponding paragraph of DoD 5000.2-R is not applicable to ACAT 1A programs.

6.3 Test and Evaluation Reports

Point of Contact: HQDA, ATTN: DACS-TE (TEMA), 200 Army Pentagon, Washington, DC 20310-0200

6.3.1 DoD Component Reporting of Test Results

Point of Contact is the same as paragraph 6.3.

6.3.2 Live Fire Test and Evaluation Report*

Point of Contact is the same as paragraph 6.3.

* Information contained in corresponding paragraph of DoD 5000.2-R is not applicable to ACAT IA programs.

6.3.3 Beyond Low-Rate Initial Production Report*

Point of Contact is the same as paragraph 6.3.

* Information contained in corresponding paragraph of DoD 5000.2-R is not applicable to ACAT IA programs.

6.3.4 Foreign Comparative Test Notifications and Reports to Congress*

Point of Contact is the same as paragraph 6.3.

* Information contained in corresponding paragraph of DoD 5000.2-R is not applicable to ACAT IA programs.

6.3.5 Electronic Warfare (EW) Test and Evaluation Reports

Point of Contact is the same as paragraph 6.3.

6.3.6 Annual Operational Test and Evaluation Reports*

Point of Contact is the same as paragraph 6.3.

The Operational Test and Evaluation Command (OPTEC) will publish an annual report of test activities which support the Army leadership in their decision making process. This report will be submitted NLT 31 October each year to be submitted to the Deputy Under Secretary of the Army (Operations Research) (DUSA(OR)) and Vice Chief of Staff, Army (VCSA).

* Information contained in corresponding paragraph of DoD 5000.2-R is not applicable to ACAT IA programs.

6.4 Contract Management Reports

Point of Contact is the same as paragraph 6.1.

6.4.1 Contractor Cost Data Reporting (CCDR)*

Point of Contact is the same as paragraph 6.1.

* Information contained in corresponding paragraph of DoD 5000.2-R is not applicable to ACAT IA programs.

6.4.2 Cost Performance Report (CPR) DID DI-MGMT-81466 (DoD 5010.12-L)

Point of Contact is the same as paragraph 6.1.

6.4.3 Cost/Schedule Status Report (C/SSR) DID DI-MGMT-81467 (DoD 5010.12-L)

Point of Contact is the same as paragraph 6.1.

6.4.4 Contract Funds Status Report (CFSR) DI-MGMT-81468 (DoD 5010.12-L)

Point of Contact is the same as paragraph 6.1.

6.4.5 Cooperative R&D Projects Report

Point of Contact: Chief, Cooperative Research, Development, and Acquisition, Office of the Deputy Under Secretary for International Affairs (SAUS-IA-DSC), Washington, DC

Part 7
Career Management for Army Acquisition Corps and Acquisition Workforce Members

(This Part not present in DoD 5000.2-R.)

Point of Contact: Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), ATTN: SAAL-ZAC (Suite 10100), 2511 Jefferson Davis Highway, Arlington, Virginia 22202-3911.

References:

Chapter 87, Title 10 USC, "Defense Acquisition Workforce (DAWIA)," as amended through 31 December 1996.
U.S. Office of Personnel Management Qualification Standards for General Schedule Positions.
DoD Directive 5000.52, "Defense Acquisition Education, Training, and Career Development Program."
DoD 5000.52-M, "Acquisition Career Development Program."
DoDI 5000.58, "Defense Acquisition Workforce."
AR 690-950, "Career Management."
AR 690-400, "Employee Performance and Utilization."
AR 350-1, " Army Training and Education."
DA PAM 600-3, "Commissioned Officer Development and Career Management."
DA Form 2442, Level I and II Certification certificate.
AAE Form 02, Level III Certification certificate.
Army Acquisition Corps/Army Acquisition Workforce Civilian Training Opportunities Catalog.
Defense Acquisition University Homepage (http://www.acq.osd.mil/dau).
DoD Acquisition Workforce Personnel Demonstration Project Web Site (http://www.crfpst.wpafb.af.mil/demo)
Army Civilian Personnel On-line Web Site (http://cpol.army.mil)
Army Acquisition Corps Homepage (http://dacm.sarda.army.mil)

7.1 Acquisition Career Management

The Army's Director, Acquisition Career Management (DACM) is the Military Deputy (MilDep) to the Assistant Secretary of the Army (Acquisition, Logistics and Technology) (ASA(ALT)), as delegated by the Army Acquisition Executive (AAE). The DACM directs the Army Acquisition Corps (AAC) as well as the Army's implementation of the requirements set forth in the DAWIA.

a. Acquisition Career Management Office. The Acquisition Career Management Office (ACMO) assists the DACM and the Deputy Director, Acquisition Career Management (DDACM) in acting as the Army's single point of contact for all matters pertaining to implementation of the DAWIA, to include policy development. Essentially, the ACMO is the architect of the future Army Acquisition Workforce (AAW) and, thereby, an important link to the AAW/AAC. The ACMO also assists the DACM and DDACM in managing the AAW/AAC personnel life cycle.

b. U.S. Total Army Personnel Command (PERSCOM). PERSCOM implements DACM policy related to DAWIA. PERSCOM has delegated responsibility for this function to its Functional Area Management Development Division. This division directs acquisition implementation through one of its branches, the Acquisition Management Branch (AMB). The AMB centrally manages all AAC military officers and civilians to include members of the Competitive Development Group (CDG). It provides to AAC officers the same services that a military officer's basic branch provides. Assignment officers in AMB maintain officer records, prepare officer records for boards, and carry out officer assignments. In a manner analogous to the military assignment officers, Functional Acquisition Specialist's (FASs) develop and maintain files; facilitate education and training; and facilitate career-broadening assignments for civilians. The AMB acts as the lead for PM and Acquisition Command Central Selection Boards as well as for selection boards for Senior Service College, CDG, and other training and education opportunities. The AMB performs AAC accession and DAWIA certification and reporting for active component military AAW members.

c. Acquisition Career Management Advocates (ACMAs). ACMAs have been appointed at many regions and organizations to ensure the AAW routinely receives consistent and timely information on available acquisition career management programs (to include education, training, and competitive opportunities) and initiatives. These individuals are senior acquisition leaders who serve to enhance the communication of information routinely routed through command and functional channels. By serving as the DACMs link to the field, the

ACMA also provides an opportunity for commands to express concerns affecting their workforce. The ACMAs perform these functions in addition to their normal position responsibilities.

d. Customer/Field Support Offices. The DACM has established Customer/Field Support Offices at selected sites throughout CONUS and OCONUS to assist the ACMAs in communicating with the AAW. These offices are staffed with Acquisition Workforce Support Specialists (AWSSs). The primary function of the AWSSs is to support the ACMAs as they carry out their duties and responsibilities. AWSSs provide assistance to the AAW by answering questions and providing information on acquisition career management programs and initiatives.

7.2 Acquisition Workforce

The AAW consists of military officers and permanent civilian employees occupying acquisition positions. Civilian members of the AAC not currently serving in acquisition positions are also included in this population.

a. Positions. The DACM maintains a Civilian Acquisition Position List (CAPL) which is a listing of all authorized civilian acquisition positions in grades GS-05 through Senior Executive Service (SES). The DACM also maintains a Military Acquisition Position List (MAPL) which includes Active Duty and Reserve Component officer positions as well as a complete listing of medical acquisition positions for officers at the rank of Captain through Colonel. These lists comprise the entirety of AAW positions. The CAPL and MAPL position lists are reviewed and updated annually through a board process and approved by the DACM. These position listings are developed using a regimented process that includes direct input from individual organizations and commands. Additionally, for each list, a robust, centralized board process is employed to ensure that the positions encompass validated acquisition duties and add value to the acquisition process. Critical acquisition positions (CAPs) at the General Officer level are identified and centrally managed by the DACM.

b. Personnel. In addition to a listing that defines acquisition workforce positions, the DACM also maintains a dynamic set of data that documents education, training, and assignment history on every member of the workforce. This data is significantly different from the position list. This information focuses on information about people in the acquisition workforce. This data set is useful in not only meeting mandated reporting requirements but also in effectively managing and determining human resource requirements for the AAW.

7.2.1 Acquisition Career Fields (ACFs) and Acquisition Position Categories (APCs)

The DoD has defined 12 ACFs and 14 APCs (Table 7-1). “Program Management Oversight” and “Education, Training and Career Development” are used only as APCs and cannot be used as a career field. The Army does not utilize the Auditing ACF/APC.

Table 7-1.
Acquisition Career Fields and Acquisition Position Categories

Career Field or Position Category	ACF/APC* Code
Acquisition Logistics	L
Auditing	U
Business, Cost Estimating and Financial Management	K
Communications-Computer Systems	R
Contracting	C
Education, Training and Career Development (APC only)	X
Industrial/Contract Property Management	D
Manufacturing and Production	G
Quality Assurance	H
Program Management	A
Program Management Oversight (APC only)	V
Purchasing	E
Systems Planning, Research, Development and Engineering	S
Test and Evaluation	T

* ACF/APC: Acquisition Career Field/Acquisition Position Category

7.2.2 Acquisition Career Field Certification

Certification is important to both military and civilian members of the AAW because the DAWIA requires that standards be associated with all acquisition positions. For civilians, certification in their ACF should be the first goal in building their IDP. Certification ensures that DoD employees will meet the mandatory education, training, and experience standards for the career levels of the positions to which they are assigned. It also identifies for organizations and individuals those areas in which additional education, training, and experience are required. For the employee, whether military or civilian, certification documents their qualifications in terms of education, training, and experience for the level of their current position. It further documents the employee's qualifications for future positions within their ACF.

a. Army's Approach to Certification. Army acquisition employees, whether military or civilian, are encouraged to pursue multiple certifications in ACFs in addition to their current career field. Once an employee has achieved a high level of expertise and been certified within their own primary career field, they are encouraged to expand their interests and achievements into other career fields. This does not, however, relieve the employee of the requirement to be properly certified in their current position. The intent is for the AAW to continue to diversify and enjoy career-broadening training and experiences to better serve the Army in future leadership positions.

Requirements. All military and civilian AAW members in acquisition positions are required to meet the applicable mandatory education, training, and experience standards established in DoD 5000.52-M. Each acquisition position has a certification standard established for it. One of the key elements in the establishment of the certification standard for an acquisition position is the identification of the position's Acquisition Position Category (Table 7-1). The APC code, along with Acquisition Career Level (ACL, Table 7-2), determines the certification standard against which the employee will be compared. The education, experience, and training standards for the career level assigned to a position are the standards the incumbent of the position must meet. The specific certification requirements of a position are ascertained by (1) determining the ACF; (2) determining the required career level; and (3) referring to DoD 5000.52-M, and the latest edition of the Defense Acquisition University (DAU) Catalog, and matching the career field and career level. The standards in DoD 5000.52-M apply equally to the 12 ACFs and their corresponding APCs. An acquisition position certification standard is assigned at the time an acquisition position is designated.

Table 7-2
Acquisition Career Level

ACL	EXPLANATION	RANK*	GRADE*
I	Requires Entry Level (Level I) Achievement		GS-5 to 8
II	Intermediate Level (Level II)	CPT to MAJ	GS-9 to 12
III	Senior Level (Level III)	MAJ and above	GS-13 and above
* These are the rank and grades typically associated with each acquisition career field level. Note that GS-14 positions must be at least Level II, a requirement for AAC membership.			

c. Waivers. Military and civilian AAW members assigned to acquisition positions after October 1, 1993 must meet the acquisition certification standards. Individuals should meet Level II and Level III certification standards before being assigned to positions at that respective level. In cases where the potential assignee does not meet the certification requirements, the organization has 18 months to qualify the individual to meet the standards or a waiver must be requested to allow the individual to remain in that position. The requirement for certification itself cannot be waived. A waiver only allows the individual to remain in the present position without being certified for a specific period of time while pursuing the required certification. Authority to approve waivers rests with the DACM and the AAE.

d. Current Standards. The standards for certification are delineated in DoD 5000.52-M, Appendices A through I. Certification standards are a combination of education, training, and experience requirements. To determine if an individual meets the mandatory training standards for certification at a certain level, one should consult both DoD 5000.52-M and the current version of the DAU Catalog. The DAU Catalog is published annually and available electronically. It can accommodate course changes more readily than a DoD policy manual. However, in the event of a discrepancy between the DAU Catalog and the DoD 5000.52-M, the DoD manual takes precedence in all matters except the Certification Standards Checklists.

(1) Once an individual is certified at a particular level, he remains certified at that level notwithstanding any new requirements identified for that particular level.

(2) DoD is working on policy that would require AAW members to take training in order to maintain their currency in the career fields in which they are certified. The Army supports this position because it ensures that the AAW is informed, current, and competitive with both other service and industry counterparts.

e. Certification vs. Position Qualifications. There is a distinct difference between certification requirements for an individual occupying an acquisition position and position qualifications. Certification requirements relate to the career level, in other words, (i) entry or basic, (ii) intermediate or journeyman, or (iii) advanced or senior, of an acquisition position. Within these levels, individual positions have specific education, training, and experience standards for acquisition positions that go above and beyond the general education and experience standards for civilian positions that are specified in the current edition of the U.S. Office of Personnel Management (OPM) Qualification Standards for General Schedule Positions.

f. Reciprocity. DoD policy mandates the acceptance of certification throughout the entirety of the Defense community. Accordingly, Army employees who have been certified by other DoD components (for example, OSD, Defense Agencies, Navy, and Air Force) do not require additional certification. The acquisition certifications achieved while employed by another service are fully recognized by the Army. These employees should complete the Acquisition Civilian Record Brief (ACRB) in accordance with the process explained below.

7.2.3 Alternate Training Methods

Instead of attending the mandatory training courses, individuals may meet the mandatory training requirements in a variety of ways. They are fully explained in DoD 5000.52-M and are summarized as follows: (1) completion of a certified equivalent course; (2) passing the applicable DAU equivalency exam, if available; (3) completion of certain academic courses offered by civilian institutions of higher education that are approved by the Under Secretary of Defense (Acquisition & Technology (USD(A&T)); and (4) completion of an accredited academic degree or certificate program offered by civilian institutions of higher education that are approved by the USD(A&T).

7.2.4 Army Acquisition Corps

Although the AAC was established in response to the DAWIA of 1991, the strategic vision for the AAC forms the foundation for all policies and initiatives impacting the AAW. This vision is to develop ". . . a corps of leaders willing to serve where needed and committed to providing soldier systems critical to decisive victory now and in the 21st Century through development, integration, acquisition, fielding, and sustainment." All of the Army's acquisition career management initiatives are guided by this vision. The AAC is a subset of the AAW, consisting of selected military officers in the rank of Major and above and civilian personnel in grades GS-13 and above, who have applied for and meet the requirements for membership in the AAC. All acquisition positions at the rank of Lieutenant Colonel or grade of GS-14 or higher are designated as CAPs. A member of the AAC must encumber a position designated as a CAP.

7.2.5 Acquisition Corps Membership

Individuals meet minimum statutory requirements to become an Acquisition Corps member. Per the DAWIA, eligibility for Acquisition Corps membership is open to military officers or civilian employees who have attained the rank of Major or grade GS-13 or higher; or applicants for employment having previous acquisition experience in government; or those having equivalent experience in private industry. The Army's current policy limits civilian accession into the AAC to those who apply for and are accepted into a CAP. In addition to these requirements, prospective members must be certified to at least Level II, or have completed all mandatory acquisition career field (ACF) training for Level II, in their primary ACF. Although a small number of civilians at the grades of GS-13 and below are members of the AAC, current Army policy states that GS-13 and below civilians are not eligible for AAC membership until they are selected for a CAP or they graduate from the CDG program. As an alternative, all GS-13s meeting the AAC qualifications are offered membership in the Corps Eligible (CE) program.

The CE program was established by the ACMO to identify members of the AAW meeting the qualifications for AAC membership. The CE program reduces the time needed to determine AAC eligibility when a CE is selected for a CAP. Formal acceptance into the CE program is not a prerequisite for selection into a CAP. Individuals are accessed into the CE program through a streamlined AAC qualifications review process.

a. Qualifications. Figure 7-1 describes the minimum AAC qualification requirements. These requirements are for AAC membership only. They do not address additional requirements that may be required by an individual position, such as certification within a particular ACF. Special qualification requirements also

apply to Program Executive Officers (PEOs), deputy PEOs (DPEOs), Senior Contracting Officials (SCOs), Program/Project/Product Managers (PMs), and Deputy PMs (DPMs).

b. Exceptions to Requirements. Figure 7-2 describes the instances in which there are exceptions to the qualifications described in Figure 7-1.

c. AAC Accession Authority. The DACM has delegated AAC accession and removal authority to the DDACM.

d. Civilian Mobility. Mobility is a condition for membership in the AAC. Generally, mobility only becomes a consideration for AAW/AAC members when they apply for centrally-selected board positions, certain long-term training programs, and competitive development programs, such as the CDG. There are three types of mobility.

(1) Functional mobility consists of a new assignment within the same commuting area but to a position in:

AAC MEMBERSHIP REQUIREMENTS

References: Chapter 87, 10 USC, Section 1732, "Selection criteria and procedures" and DoD 5000.52-M, Appendix M, Section L, "Qualifications: Selection into an Acquisition Corps".

In order to become a member of the AAC, an individual must:

- Be an employee currently serving at the rank of Major or in the grade of GS-13 or above; *(Note: For civilians, Army policy limits eligibility to GS-14s and above, based on assignment to a CAP, unless the civilian is a graduate of the CDG program);*
- Be assigned to a CAP (Army policy; applies to civilians only);
- Have four years of acquisition experience;
- Have signed a mobility statement (civilians only);
- Possess a baccalaureate degree from an accredited educational institution;
- Be certified to Level II or have completed Level II mandatory acquisition training, in the individual's primary ACF.

AND

Either:

Possess at least 24 semester credit hours from an accredited institution of higher education, from among the following disciplines: accounting, business finance, contracts, economics, industrial management, law, marketing, organization management, purchasing, and quantitative methods.

Or:

Possess at least 24 semester credit hours in the individual's acquisition career field, from an accredited institution of higher learning and either 12-semester credit hours from among the disciplines listed above or training in the disciplines listed above which is equivalent to the 12 semester credit hours.

Figure 7-1. AAC Membership Requirements

(*a*) another ACF;

(*b*) another functional area within an ACF; or

(*c*) a subspecialty within a functional area or ACF.

(2) Organizational mobility refers to a new assignment within the same commuting area to a different office or command level.

(3) Geographic mobility is the relocation to a position outside of the commuting area.

Voluntary mobility of all three types is desirable, encouraged, and should be considered career enhancing. Due to fiscal constraints, geographical moves will be limited. Involuntary mobility is the least preferred alternative for the individual and the organization.

EXCEPTIONS TO ACQUISITION CORPS REQUIREMENTS

- The Army Acquisition Career Program Board (ACPB) may waive any or all of the requirements with respect to an individual if the board certifies that the individual possesses significant potential for advancement to levels of greater responsibility and authority, based on demonstrated analytical and decision-making capabilities, job performance, and qualifying experience. The ACPB may not waive the certification requirement.

OR:

- If the individual has ten or more years of acquisition experience as of October 1, 1991, the above education requirements do not apply. (This exception applies to the education requirements only, i.e., the college degree requirement and the 24/12 semester-hour requirements.)

OR:

The individual meets all three of the following conditions:

- Was serving in an acquisition position on October 1, 1991;
- Had less than ten years experience in an acquisition position as of October 1, 1991;
- And has 24 semester credit hours in the above listed disciplines (Combinations of college credit courses and approved equivalency examinations totaling 24 semester hours may be used, but there is no alternative to the requirement that the 24 hours all be in the stated business-related disciplines).

OR:

- The individual is a member of another DoD Acquisition Corps.

Figure 7-2. Exceptions To Acquisition Corps Requirements

e. Civilian Accession. Civilians may enter the AAC under any of the following conditions:

(1) After selection to a CAP as a CE, the individual is immediately promoted permanently into the position. When applying for a CAP, the CE member should submit a copy of their CE acceptance letter with the application for the position. If selected for the position, they are required to sign the Army's mobility agreement and the Written Agreement to Remain in Federal Service. These documents should be provided by the selecting organization and forwarded to the AMB at PERSCOM, along with the “Request for Approval for Selectee for Membership in the AAC.” The AMB completes a DD Form 2587—”DoD Acquisition Corps Certification of Admission,” and forwards it to the DDACM for signature. Once signed, the individual receives the AAC membership certificate and welcome letter.

(2) After selection to a CAP as a non-CE, the individual is placed temporarily into the position for a period not to exceed 180 days, until the person meets AAC requirements and is processed into the AAC. If the person does not currently meet the requirements, they will have six months to complete the requirements. Interim referral is a process currently in place to review AAC requirements of non-CE individuals tentatively selected for a specific CAP vacancy. Information on interim referral is contained in the May 16, 1995, PERSCOM (OPB-B) memorandum to all Civilian Personnel Offices, subject: “AAC Personnel Operations Letter #3—Revised Interim Referral Procedures.” Any selection of a non-AAC member to a CAP is tentative. A non-AAC member may occupy a CAP only on a temporary basis (in other words, either a temporary promotion or a temporary reassignment) for a period of up to six months.

(3) Individuals are immediately accessed into the AAC upon graduation from the CDG program.

(4) Civilian employees who are members of the Acquisition Corps of another military department or a Defense agency are automatically qualified for the AAC. Upon entering the Army from another service's Acquisition Corps, the individual must provide proof of membership in the prior service's Acquisition Corps, which includes documentation on how eligibility was determined by the other service. The individual is required to sign both the Army's mobility agreement and the Written Agreement to Remain in Federal Service.

f. Military Officer Accession. In order to fill the Lieutenant Colonel/Colonel CAPs and develop a pool of professional acquisition leaders, it is necessary to start developing officers at the rank of Captain. Sustainment of the AAC depends on an annual accession of officers at or before their eighth year of commissioned service. Captains who wish to be accessed into the AAC must be branch-qualified in their basic branch. The

prospective AAC candidate must have successfully demonstrated promotion potential through performance in company-grade (in other words, Lieutenant and Captain) branch-qualifying assignments. The officer submits an application to their basic branch requesting their file be placed before the Acquisition Accession Board (AAB). The candidate's file is reviewed by the AAB for selection to the AAC. Board members consider the following aspects: past performance, educational background, and promotion potential. The board selects primarily from a single year group (YG), usually officers entering their eighth year of service. However, only 80% of the required YG number are initially selected in the first year of consideration. This permits accession of additional officers in subsequent years, until the twelfth year of service when the YG inventory is complete. Once in the Acquisition Corps, officers compete for promotion in the same competitive category as line officers from the basic branches. Promotions are based upon past performance and potential for future service at the higher grade. Members of the Reserve Components are accessed through their component's acquisition personnel office.

7.2.6 Central Selection Boards

To select the best qualified individuals, the AAC uses central-selection boards for PM assignments (military or civilian), and for contracting, R&D Center, software development center, and test center command positions. Central selection boards are also used for certain training and education opportunities, and special career development programs such as the CDG. These central-selection boards conform to a stringent set of rules that govern the conduct of the board. The proceedings of the board and board results are kept confidential until the results of the board are validated by the approval authority.

a. Project and Product Manager DA centralized-selection boards are held annually for PM positions. The requirements for these boards are identified by a General Officer Steering Committee (GOSC) and approved by the AAE. These boards are convened to select the best-qualified military AAC officers, from both Active and Reserve Components, and civilian AAC or CE members for PM positions. The Project Manager positions are filled at the rank/grade of Colonel/GS-15. Product Manager positions are filled at the rank/grade of Lieutenant Colonel/GS-14. The board reviews an individual's file in terms of education, training, experience, performance, and potential; and develops an order-of-merit list of the best-qualified candidates. Both PM boards have promotion authority for civilian applicants. The board proceedings and its results are kept confidential until released by the approval authority—normally the Secretary of the Army.

b. Centrally selected positions in contracting, R&D center, software development center, and test center commands are currently only open to military AAC officers. An annual board reviews an individual's file in terms of education, training, and experience and develops an order of merit list of the best-qualified candidates. The board proceedings and its results are kept confidential until released by the approval authority—normally the Secretary of the Army. All officers selected for these commands attend courses appropriate to the particular command prior to assuming duties.

c. AAC selection boards for civilian education and training opportunities are held at least once a year. The purpose of the boards is to review nominations and select applicants based upon established program eligibility and AAC criteria. The convening authority for the selection boards is the DACM. The DACM authorizes the convening and scheduling of boards and approves or disapproves board recommendations. Boards are convened to identify the best-qualified candidates from among those nominated based upon assessment of the candidate's Career Management Individual File (CMIF), overall benefits to the AAC, and the continuing professional development of the individual. Boards are administered by PERSCOM.

7.2.7 Central Management.

The AAC central management concept supports the strategic vision of the AAC and the objectives of the DAWIA. It focuses on developing the Army's future acquisition leaders through training and career development programs and by challenging them with demanding positions. Through this concept, promising individuals can be placed into positions that provide the Army the greatest return on its investment and, at the same time, provide individuals the opportunity to further develop their careers.

a. DACM Database. To facilitate central management, a DACM database is being constructed to provide a single source of information on acquisition personnel and positions. Through the centralized management concept, the DACM database will facilitate matching personnel skills with position requirements to ensure that qualified personnel are serving in the CAPs. It will also enable the Army to more accurately define needed skills and to project workforce requirements. This database will provide for an accurate characterization of the workforce with data on personnel education, training, experience, and positions held as well as information on performance and potential.

b. Acquisition Civilian Record Brief. To facilitate comparison of military and civilian career records, the ACRB has been created. The ACRB is a paper display of personal and acquisition position data for civilians in

the AAW and the AAC. It is designed to closely reflect the format and content of the Officer Record Brief (ORB). Consult the AAC Homepage for information on reviewing information on the ACRB, guidance on receiving a copy of the ACRB, and instructions for updating the information.

7.2.8 Career Management Individual Files

To assess civilian AAC candidates for central PM Boards, training and education boards, and assignments, the PERSCOM AMB uses the Career Management individual file (CMIF) to eliminate an extensive application process for AAC opportunities. For non-AAC applicants, a temporary CMIF is created. The CMIF file consists of an updated Acquisition Civilian Record Brief, abbreviated work histories, the six most recent evaluations and support forms, a mobility agreement, a Written Service Agreement, and a copy of the SF-50 assigning the individual to their current position.

7.2.9 Senior Rater Potential Evaluation (SRPE)

The selection of the best-qualified individuals requires comparison of qualifications of both military and civilian AAC members competing for CAPs. Current files of military personnel include a senior rater evaluation reflecting both manner of performance and demonstrated potential for advancement. The current civilian performance appraisal system rates past performance, which is based on accomplishment of agreed-upon objectives. The SRPE was developed to evaluate and document the leadership potential of civilian acquisition employees. Each employee is evaluated on the potential to become an acquisition leader based on ratings of key leadership competencies. The SRPE is currently being finalized. Once approved by the ASA(M&RA), SRPE policy and procedures will be staffed with the field.

Once approved, it is anticipated that the SRPE will become an annual requirement coinciding with current performance appraisal cycles. Current draft policy calls for employees in grades GS-13 and above or employees in any demonstration project pay/broad band eligible to compete for CAPs will require a SRPE.

7.3 Career Development as a Mission

Career development is critical to building future acquisition leaders. In the past, many supervisors have not been fully committed to the career development of their employees. The Army is striving to change the way that career development is viewed. The driving principle is that active career development is a mission for all organizations. AAC Policy Memorandum 96-01, “Career Development as a Mission,” establishes the Army's policy for career development. Under this policy, organizations must ensure each individual's career development activities, whether a training course, an educational commitment, or a developmental assignment, are considered part of the organization's mission. Organizations must plan for and allow employees to participate in career-enhancing activities. The policy links employee career development to performance objectives in both military and civilian performance management systems. Military and civilian supervisors of AAW members will have their subordinates' career development as a major performance objective within their formal performance evaluation process.

7.3.1 Individual Development Plan (IDP)

AAC Policy Memorandum 96-01 established the IDP as the Army's vehicle for the systematic approach to civilian career development. AAC/AAW Policy Memorandum 96-02, “Individual Development Plan for the Army Acquisition Workforce,” implements the IDP. DoD 5000.52-M, mandates an IDP for civilian members of the workforce through certification at Level III. The Army policy requires each member of the AAW to have a five-year IDP regardless of certification level or grade. The policy requires this five-year IDP to be reviewed and updated annually in conjunction with the TAPES review process. Although the IDP is specifically designed for civilians, military officers are encouraged to use the IDP for long-range planning. Short-term planning should be part of the objectives on the Officer Evaluation Report (OER) Support Form.

The IDP provides a written framework for enhancing civilian performance and preparing the employee for future and higher-level assignments. It defines the needs of the employee in terms of the three major components of career development: education, training, and experience. The IDP is developed jointly by the supervisor and the employee and supplements the annual performance appraisal. The IDP should document consensus between the supervisor and the employee. It should also reflect an ongoing assessment of previous education, training, and experience. This should then lead to planning for future career objectives and the education, training and development efforts necessary to realistically achieve them. The Quality Achievement Factors (QAFs) and the Civilian Acquisition Career Model should be considered when developing the IDP. The IDP should reflect the AAW member's plan to achieve these goals. Supervisors and civilian employees each have a responsibility for completion of IDP objectives.

In forming career development objectives, AAW members may obtain additional advice and assistance from numerous sources. Among these are the acquisition proponency officers or training specialists in the

ACMO; activity career program managers; Acquisition Career Management Advocates (ACMAs); or AWSSs in the Customer/Field Support Office.

7.3.2 Quality Achievement Factors and the Civilian Acquisition Career Model

Both the Quality Achievement Factors (QAFs) and the Civilian Acquisition Career Model were established as the acquisition community's "road map to success." They illustrate the education, training and experience recommended for acquisition professionals to be competitive for senior acquisition positions. The current components of the QAFs and the model reflect those qualifications of senior acquisition professionals. The components will continue to change over time as they evolve to reflect the characteristics of those individuals selected by the central-selection board process.

a. Quality Achievement Factors (QAFs, Table 7-3). QAFs assist both the individual and the supervisor in merging the AAC strategic vision into the IDP. QAFs are currently targeted at those grades associated with CAPs. However, an understanding of what is important at the higher grades is useful for all AAW members. QAFs are factors based on the Army's vision of what makes a highly successful senior acquisition leader. The factors themselves are not mandatory requirements, nor will they be used for promotion or board screening purposes. The intent is for individuals to use QAFs as a guide for career development. The key components of the QAFs and their importance for growth into key leadership or management positions are explained below.

(1) Education. The DAWIA requires a baccalaureate degree for all Contracting personnel in the 1102 occupational series and for Acquisition Corps members with certain exceptions (see Figure 7-2). In addition, DoD 5000.52-M requires a degree for certification in many ACFs. However, a degree is desirable for all AAW members. It is recommended that all acquisition professionals strive to not only attain their baccalaureate degree but also continue their education with the objective of attaining one or more graduate degrees.

(2) Training. By the time acquisition professionals reach the GS-13 level, they should have completed most of their technical or career-specific training. At this grade level, training should become more focused on leadership and management. The DDACM strongly recommends that all AAW members, GS-12 and GS-13, and all ACC members attend the Army Management Staff College as well as various management and leadership courses sponsored by the Assistant Secretary of the Army (Manpower and Reserve Affairs) (ASA(M&RA)) or other organizations such as the Office of Personnel Management. A listing of Army Core Leader Development courses can be found in AR 350-1. All of these courses are designed to impart the leadership and management skills necessary to effectively motivate and manage the workforce.

(3) Experience. After the acquisition professional builds a strong foundation in their primary field, they should seek opportunities to gain varied experiences in other ACFs. These career-broadening experiences can lead to certification in multiple ACFs and fulfill DAWIA legislative intent. As a result, this benefits both the Army and the acquisition professional.

b. Civilian Acquisition Career Model. The Civilian Acquisition Career Model (Figure 7-3) was developed to address the acquisition career development of the AAW. It augments the QAFs by displaying the professional development needed from entry level to senior level positions. Acquisition leader development activities should start early so that competencies and cross-functional job experience are achieved throughout an individual's career. The focus of this model is to begin to develop acquisition leaders and managers early on in their careers, providing them with a broad-based knowledge of the various acquisition functions overlaid with leadership and management experience. This acquisition career model also provides a broad view of the different career development activities within the acquisition career track. The time frames and grade levels for accomplishment of the activities are given only as a guide. In following the road map, AAW members must also complete any education, training, or self-development courses required of all Army civilians which are identified in AR 690-400, Chapter 410, "Training," as well as any requirements specific to the functional career program.

7.3.3 Army Civilian Training Education and Development Systems (ACTEDS) Plan

The Deputy DACM will publish the ACTEDS plan for the AAC and the Program Management Career Program. The AACACTEDS plan will crosswalk acquisition sections from all career programs, identifies cross-functionality training factors, provides viable career paths for multiple certifications and establishes consistency in terminology. The AAC ACTEDS plan will also cover the various acquisition personnel demonstration projects. The Program Management ACTEDS is a single source document that provides systematic, sequential and progressive training and development of career Army civilians from intern to senior managerial and executive levels. Further information may be obtained at the AAC Homepage once the ACTEDS has been published.

Table 7-3
Acquisition Corps Quality Achievement Factors Guide for Career Planning

For Grade	Certification Level	Education	Experience	Training
GS-14	III in primary Acquisition Career Field (ACF) II in secondary ACF	BA/BS + 18 graduate semester hours Army Management Staff College **OR** Command and General Staff College **OR** equivalent	Leadership or management experience Operational or field level assignment* Two (2) MACOM, MSC or joint service assignments** HQDA or MACOM HQ assignment	Management and leadership courses e.g., Organizational Leadership for Executives (OLE) Personnel Management for Executives (PME), etc. Continuing self-development training***
GS-15	III in primary ACF III in secondary ACF	MA/MS/MBA/MPA **OR** equivalent Continuing Education Units	Supervisory experience, e.g., division or branch chief Two (2) operational or field-level assignments* Two (2) MACOM, MSC or joint service assignments** HQDA or MACOM HQ assignment HQDA or OSD assignment	Executive career development courses e.g., Federal Executive Institute, Brookings, Harvard, Personnel Management for Executives II, etc. Continuing self-development training***
SES	III in primary ACF III in second ACF III in tertiary ACF	MA/MS/MBA/MPA + Continuing Education Units Senior Service College	Managerial/ supervisory experience, e.g., director Two (2) operational or field-level assignments* Three (3) MACOM, MSC or joint service assignments** HQDA or MACOM HQ assignment HQDA or OSD assignment	Executive career development Courses e.g., Federal Executive Institute, Brookings, Harvard, Personnel Management for Executives II, etc. Continuing self-development training***

*Operational/field-level assignments include assignment to or in support of PEO/PM offices, TRADOC System Management Offices, etc.

**Joint service assignments include acquisition positions in other DoD and Federal agencies, as well as private industry. Also included are assignments/details normally lasting 6-12 months to Source Selection Evaluation Boards and HQDA/MACOM study teams, "Tiger Teams," and special projects. Assignments in PEO offices equate to MACOM assignments. Note that individuals should cross commands in selecting assignments for additional career broadening.

***Self-development training includes professional seminars, refresher courses, professional certificate programs, etc.

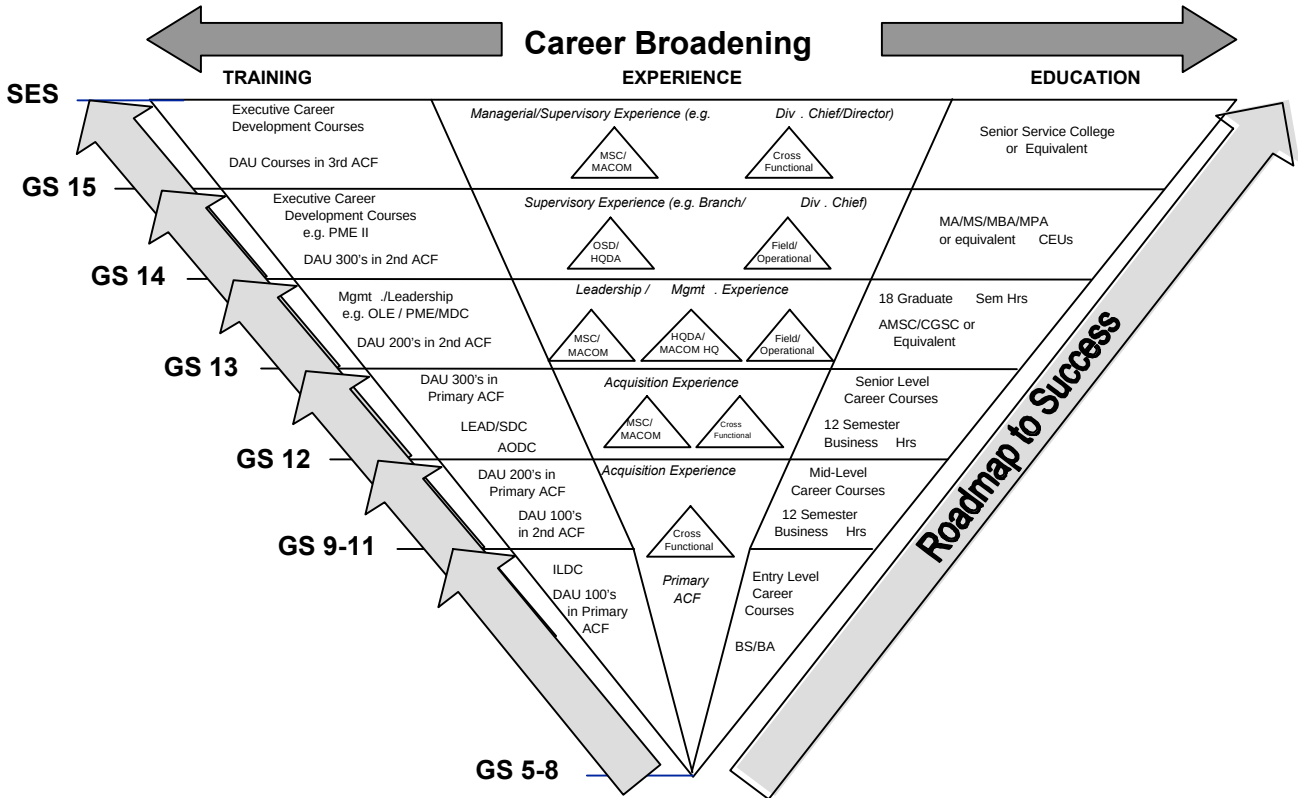


Figure 7-3 Civilian Acquisition Career Model

7.3.4. Military Leader Development Model

The leader development model for all AAC officers is defined in DA PAM 600-3. Consult this pamphlet as the single authoritative source for information on AAC officer entry qualifications, accession procedures, assignments, training, and education. DA PAM 600-3 will be updated as the Army implements its new Officer Personnel Management System XXI.

7.3.5 Rotational Review

Procedures are under development to implement the rotational requirement for members of the AAC serving in critical acquisition positions. These procedures will allow organizations to determine on a case-by-case basis, whether the Army and the person are better served with a new assignment after completion of five years of service in a particular CAP. Rotational reviews provide opportunities for career broadening assignments as well as opportunities to infuse new ideas into organizations. In accordance with DAWIA, the Army conducted annual rotational reviews in 1996 and 1997. The results were reported to DoD.

7.4 Acquisition Education and Training

Acquisition and leadership training is a shared mission of the DACM, acting for the AAE; the ASA(M&RA); the Defense Acquisition University (DAU) schools; the DoD career functional boards; as well as the Army functional community. It is a team effort to provide the members of the AAW with the best possible instruction for every course and career field. This section provides information on the education and training opportunities available and procedures for obtaining the variety of course offerings. Generally, all education and training programs open to the Active Component military members of the AAW are available to the Reserve Component members of the AAW, except for Training With Industry.

7.4.1 Education

a. Education Opportunities. Civilian members of the AAW are eligible for academic degree training to complete their bachelor's degrees or the 24/12 semester credit hours required for AAC or CE membership.

Military officers should refer to DA PAM 600-3 for requirements and procedures to participate in advanced degree programs. Educational disciplines are limited to those that underpin the acquisition functions described in DoD 5000.52-M.

b. Army Acquisition Tuition Assistance Program (ATAP). The ATAP program is available to all AAW members for completion of their mandatory 24/12 semester hours or for undergraduate degree programs. For AAC, CE, and CDG members, ATAP also funds graduate degree programs. Civilians should consult the annual Army Acquisition Corps/Army Acquisition Workforce Civilian Training Opportunities Catalog for further information and application instructions. Military officers should contact their supporting installation training office for tuition assistance eligibility and requirements. Doctoral degree programs are not funded.

c. AAC Long-term and Part-time Programs. There are a variety of long-term and part-time training and education programs available to civilian members of the AAC in Grades in GS-14 and 15. These graduate-level opportunities are offered in acquisition-related disciplines. Consult the annual Army Acquisition Corps/Army Acquisition Workforce Civilian Training Opportunities Catalog for further information and application instructions.

d. Additional Master's Degree. For AAC, CE, and CDG members, funding for an additional master's degree under the Army Acquisition Tuition Assistance Program (ATAP) is considered under the circumstances shown below. The educational disciplines are limited to those that underpin the acquisition function as described in DoD 5000.52-M.

(1) Obtaining an additional master's degree would be appropriate for an individual's acquisition career goals and the organization's mission.

(2) Obtaining an additional master's degree provides a clear benefit to the Army. For example, if an individual has a business-related master's degree, the Army cannot fund a second master's degree that is also business-related. This may not be the case if the first degree is in a technical field.

(3) The individual's current master's degree was not funded by the DACM.

(4) The second Master's Degree has been documented and approved on the individual's IDP.

7.4.2 Training

a. DAU Mandatory Training Program. The DAU Mandatory Training Program is the vehicle for Army personnel to accomplish their Level I, II, and III mandatory training prescribed for retention in an acquisition position. The DAU also provides assignment-specific training. Funding is provided by the DAU. Both military and civilian students should follow the organization's training request procedures. Army course schedules, class rosters, and other pertinent information are available at the SAALT Homepage (http://www.sarda.army.mil/rdaisa/atrrs/aaedau.htm). Information about the DAU is located at their homepage (http://www.acq.osd.mil/dau). Consult the annual Army Acquisition Corps/Army Acquisition Workforce Civilian Training Opportunities catalog for further details.

b. Non-mandatory Training. Other training opportunities include the Materiel Acquisition Management (MAM) course, which is open to grades GS-09 through 13 and officers in the rank of Captain or Major. Two executive-level courses are available only to AAC members in grade GS-15. Consult the annual Army Acquisition Corps/Army Acquisition Workforce Civilian Training Opportunities Catalog for further information and application instructions.

c. Army Leader Training Core. Core leadership courses are available to AAW/AAC members and are applicable Army-wide. These include a variety of courses, both correspondence and resident, tailored to each level of career progression. Consult the annual Catalog of Civilian Training, Education and Professional Development Opportunities, published by the ASA(M&RA), as well as the annual Army Acquisition Corps/Army Acquisition Workforce Civilian Training Opportunities Catalog for further information. For information on course availability, both of these catalogs are available on line. See the references section at the beginning of this chapter.

7.4.3. Developmental Activities and Programs

Developmental activities and programs are designed to provide a source of varied activities that AAW employees may plan to participate in to complete the experience portion of the IDP. Additional activities are encouraged to include membership in professional societies and participation in acquisition reform activities. Below are several developmental or assignment programs available to members of the AAW.

a. Program Management Development Program (PMDP). This program is for civilians. The statutory basis of the PMDP is section 1742 of the DAWIA. The purpose of this program is to provide “...highly qualified and talented individuals an opportunity for accelerated promotions, career broadening assignments, and

specified training to prepare them for entry into the Acquisition Corps." The ACMO centrally manages these participants. The source of candidates for the PMDP is the Defense Acquisition Scholarship Program (DASP). The DASP is described in Section 1744 of the DAWIA and is administered by the DoD. College students may be enrolled or accepted for enrollment for a degree at any level. The program has been historically used to recruit a few select people working on graduate level degrees to accept acquisition positions within DoD after completion of their scholarship-funded degree program. ACMO personnel participate in selecting DASP scholars and monitor their assignments.

b. Corps Eligible Program. The CE program is both a process and a program. As a process, it is one of the means the DACM uses to determine eligibility for accession into the AAC. As a program, it prepares individuals for CAPs by affording them training opportunities and developmental assignments. CEs are provided opportunities for leadership and management seminars, as well as the opportunity to apply for the CDG program. CEs are also eligible for funding of a master's degree through the ATAP. To apply for the CE program, individuals should consult the AAC Homepage to download the application form and instructions.

c. Competitive Development Group. The CDG program has been initiated to identify and begin to develop the future civilian leaders who will eventually fill the senior acquisition positions. The CDG is a board-selected group of employees who are placed into developmental positions and are provided expanded training, leadership, and career development opportunities in a structured, three-year program. To the extent possible, these positions are representative of the acquisition workforce; are based on the future needs of the Army; and represent the distribution of GS-14 CAPs. Upon successful completion of the program, CDG graduates are accessed into the AAC. See Appendix XXVII for further CDG program details.

d. Training With Industry (TWI). A TWI program is available for Active Component military AAC officers. The objectives of the TWI program are two-fold: (1) to improve effectiveness in working with private industry and (2) to learn industry methods to apply in his/her own work environment. One-year assignments are available at selected industries. Interested officers should consult the AAC Homepage or their Assignments Officer at AMB, PERSCOM for application procedures. Benefits gained from military officer participation in the program include familiarization with commercial business practices; increased insight into commercial acquisition management; and an improved understanding of the correlation between the DoD acquisition life cycle and commercial practices. A TWI program for civilians is under development.

e. Master of Science/Industry Work-Study (MS/IWS). The MS/IWS is a one-year program that consists of a Master of Science in Science and Technology Commercialization degree offered by the IC2 Institute, University of Texas at Austin and part-time work in industry. Students work approximately 20 hours per week in an intern assignment earning credit towards the Master's degree. This intern work allows the students to obtain practical experience through completion of linked class projects and homework assignments. This program is available to both military officers and civilians in two locations—Washington, DC and Austin, TX.

7.5 Other Information Sources

a. AAC Homepage. The AAC Homepage (http://dacm.sarda.army.mil) is another form of communication available to the AAW. The Homepage provides information related to career development of the acquisition workforce, education and training programs, AAC policies and procedures, AAC qualification requirements and civilian mobility statement, as well as a listing of points of contact for all individuals responsible in the implementation of DAWIA. It is a comprehensive resource providing up-to-date news and links to relevant publications and other related web sites.

b. PERSCOM-On-Line Homepage. The U.S. Total Army Personnel Command Homepage is located at http://www.perscom.army.mil. The Acquisition Management Branch maintains a page under the Officer Personnel Management Division that provides the names, e-mail addresses and phone numbers for AMB staff and items of interest to civilian AAC members.

c. Army RD&A magazine is published bimonthly by the ACMO and is the Army's research, development, and acquisition (RD&A) magazine. It provides members of the RD&A community with articles relative to RD&A processes, procedures, techniques, and management philosophy and includes a "career development update" section in each issue.

d. Program Manager magazine is published bi-monthly by the Defense Systems Management College (DSMC) Press. It provides a forum for transmitting information on policies, trends, events, and current thinking affecting program management and Defense systems acquisition.

e. Acquisition Review Quarterly is published by the DSMC Press and is the journal of the Defense Acquisition University (DAU). It is a scholarly, pier-reviewed journal for the AAW, publishing opinions, tutorials, lessons learned, and academic research.

f. Civilian Personnel On Line http://www.cpol.army.mil provides information on Army-wide civilian leader development programs and opportunities in the “Training and Leader Development” section of Personnel Management Information Systems (PERMISS).

Note: Army Acquisition career management programs and policies will continue to be impacted as personnel demonstrations are implemented. As a continuing part of Acquisition Reform, DoD is establishing an Acquisition Workforce Personnel Demonstration Project as well as various Laboratory Demonstration Projects to assess changes in the civilian personnel management and administration systems. The demonstrations address compensation, broadbanding, simplified classification, critical skills training, sabbaticals, and simplified accelerated hiring procedures. The Acquisition Workforce Personnel Demonstration is a five-year-life cycle project and is scheduled for implementation in November 1998. Further information may be obtained at both the Demonstration Program Web Site (http://www.crfst.wpafb.af.mil/demo/) and the Army Acquisition Corps Homepage (http://www.dacm.sarda.army.mil).

Appendix A
References

Section I
Required Publications

DOD Regulation 5000.2-R

Mandatory Procedures for Major Defense Acquisition Programs (MDAPs) and Major Automated Information System (MAIS) Acquisition Programs (Accessible through the Defense Acquisition Deskbook (DAD) and on the Internet at: http://www.acq.osd.mil/api/asm/product.html.) (Cited throughout the pamphlet.)

Section II
Related Publications

A related publication is merely a source of additional information. The user does not have to read it to understand this publication.

Allied Ordnance Publication (AOP) 39

Guidance on the Development, Assessment and Testing of Insensitive Munitions (MURAT) AMC “Materiel Developer's Guide for Pollution Prevention,” December 9, 1994

AMC Pam 70-25

Functional Support Templates (Available from the DAD under Army Discretionary Documents.)

AMC Pam 715-3

Contracting for Best Value (Available from the DAD under Army Discretionary Documents.)

AMC Pam 715-17

Guide for the Preparation and Use of Performance Specifications (Available from the DAD under Army Discretionary Documents.)

American National Standard Institute/American Society for Quality Control (ANSI/ASQC) Q90 Series

Quality Management and Quality Assurance Standards

AR 5-4

Department of the Army Productivity Improvement Program (DAMRIP)

AR 5-5

Army Studies and Analysis

AR 5-11

Management of Army Models and Simulations

AR 5-12

Army Management of the Electromagnetic Spectrum

AR 5-22

The Army Proponent System

AR 11-12

Logistics Priorities

AR 11-18

The Cost and Economic Analysis Program

AR 15-1

Boards, Commissions, and Committees, Committee Management

AR 15-41

Nuclear and Chemical Survivability Committee

AR 25-1
The Army Information Resources Management Program

AR 25-30
The Army Integrated Publishing and Printing Program

AR 25-400-2
Modern Army Recordkeeping System (MARKS)

AR 27-60
Intellectual Property

AR 37-100-FY
The Army Management Structure

AR 40-5
Preventive Medicine

AR 40-10
Health Hazard Assessment Program in Support of the Army Materiel Acquisition Decision Process

AR 70-1
Army Acquisition Policy

AR 70-38
Research, Development, Test, and Evaluation of Materiel for Extreme Climatic Conditions

AR 70-47
Engineering for Transportability

AR 70-50
Designating and Naming Defense Equipment, Military Aerospace Vehicles

AR 70-75
Survivability of Army Personnel and Materiel

AR 71-2
Basis of Issue Plans (BOIP), Qualitative and Quantitative Personnel Requirements Information (QQPRI)

AR 71-3
Test and Evaluation Policy

AR 71-9
Materiel Requirements

AR 71-32
Force Development and Documentation-Consolidated Policies

AR 73-1
Test and Evaluation Policy

AR 75-15
Responsibilities and Procedures for Explosive Ordnance Disposal

AR 95-3
Aviation: General Provisions, Training, Standardization and Resource Management

AR 200-1
Environmental Protection and Enhancement

AR 200-2
Environmental Effects of Army Actions

AR 350-1

Army Training and Education.

AR 350-35

Army Modernization Training

AR 350-38

Training Device Policies and Management

AR 380-5

Department of Army Information Security Program

AR 380-10

Technology Transfer, Disclosure of Information and Contacts with Foreign Representatives

AR 380-19

Information Systems Security

AR 385-16

Systems Safety Engineering and Management

AR 525-15

Software Reprogramming Policy for Target Sensing Weapon Systems

AR 602-1

Human Factors Engineering Program

AR 602-2

Manpower and Personnel Integration (MANPRINT) in the System Acquisition Process

AR 670-1

Wear and Appearance of Army Uniforms and Insignia

AR 690-400

Employee Performance and Utilization

AR 690-950

Career Management

AR 700-18

Provisioning of U.S. Army Equipment, Internal Control System

AR 700-82

Joint Regulation Governing the Use and Application of Uniform Source, Maintenance, and Recoverability Codes

AR 700-90

Army Industrial Base Program

AR 700-101

Joint Operating Procedures, Management, and Standardization of Mobile Electric Power Generating Sources

AR 700-127

Integrated Logistic Support

AR 700-129

Management and Execution of Integrated Logistics Support (ILS) for Multiservice Acquisitions

AR 700-138

Army Logistics Readiness and Sustainability

AR 700-139

Army Warranty Program Concept and Policies

AR 700-142

Materiel Release, Fielding, and Transfer

AR 702-7

Product Quality Deficiency Report Program

AR 708-1

Cataloging of Supplies and Equipment Cataloging and Supply Management Data

AR 710-1

Centralized Inventory Management of the Army Supply System

AR 710-2

Inventory Management Supply Policy Below the Wholesale Level

AR 725-50

Requisition, Receipt, and Issue System

AR 735-5

Policies and Procedures for Property Accountability

AR 750-2

Army Materiel Maintenance, Wholesale Operations

AR 750-6

Ground Safety Modification System

AR 750-10

Modification of Materiel and Issuing Safety-Of-Use Messages and Commercial Vehicle Safety Recall Campaign Directive

AR 750-43

Army Test, Measurement and Diagnostic Equipment Program

AR 750-59

Army Corrosion Prevention and Control Program

ARDEC Pam 70-3

A Guide for Weapon Systems Developers

Army Acquisition Corps Homepage

(Available on the Internet at:http://dacm.sarda.army.mil.)

Army Acquisition Corps/Army Acquisition Workforce Civilian Training Opportunities Catalog

(Available on the Internet at: http://dacm.sarda.army.mil/careerdevelopment.)

Army Acquisition Executive Directive

Subject: Munitions Survivability Requirements for the Design and Procurement of New or Modified Ammunition/Weapons dated October 22, 1996

Army Acquisition Reform Homepage

(Available on the Internet at: http://www.acqnet.sarda.army.mil/acqref/default.htm.)

Army CALS Implementation Plan

(Available from the DAD.)

Army Civilian Personnel On-line Web Site

(Available on the Internet at:http://cpol.army.mil.)

Army Enterprise Architecture (AEA)

(Available on the Internet at: http://arch-odisc4.army.mil/aes/html/homepage.htm.)

Army Executive Agent for Insensitive Munition Guidance

Subject: Munitions Survivability Requirements for the Design and Procurement of New or Modified Ammunition/Weapons dated January 17, 1997

Army Implementation Plan for Blueprint for Change: Toward a National Production Base

Army Program Manager Pocket Guide for Implementing CALS in the Acquisition Process

Army Science and Technology Master Plan, Fiscal Year 1998

Army Systems Integration and Management Activity (SIMA) Automated Data Systems Users Manual Number ADSM 18-R24-LEI-ZZZ-UM-03

ASA(RDA) and AMC Memorandum

"Modeling and Simulation Support of the Army Acquisition Process" dated 20 September 1996

Assistant Secretary of Defense Memorandum

"Achieving Continuous Quality Improvement" dated 16 October 1986

Civilian Personnel On-line

(Available on the Internet at: www.cpol.army.mil.)

CJCSI 3170.01 (Formally MOP 77)

Requirement Generation System Policies and Procedures (Available from the DAD.)

CJCSI 6212.01A

Compatibility, Interoperability, and Integration of Command, Control, Communications, Computers, and Intelligence Systems (Available from the DAD.)

DA Memo 600-2

Policies and Procedures for Active Component Officer Selection Boards

DA Pam 5-11

Verification, Validation, and Accreditation of Army Models and Simulations

DA Pam 73-1

Test and Evaluation in Support of Systems Acquisition

DA Pam 73-2

Test and Evaluation Master Plan Procedures and Guidelines

DA Pam 73-3

Critical Operational Issue and Criteria (COIC) Procedures and Guidelines

DA Pam 73-4

Developmental Test and Evaluation Guidelines

DA Pam 73-5

Operational Test and Evaluation

DA Pam 73-6

Live Fire Test and Evaluation Guidelines

DA Pam 73-7

Software Test and Evaluation

DA Pam 600-3

Commissioned Officer Development and Career Management

DA Pam 690-400

Total Army Performance Evaluation System (TAPES)

DA Pam 700-28

Integrated Logistics Support Program Assessment Issues and Criteria

DA Pam 700-55

Instructions for Preparing the ILSP

DA Pam 700-142

Instructions for Materiel Release, Fielding and Transfer

Defense Acquisition Deskbook

(Available on the Internet at: http://www.deskbook.osd.mil/)

Defense Acquisition University Homepage

(http://www.acq.osd.mil/dau)

Defense Federal Acquisition Regulation Supplement

(Available on the Internet at: http://farsite.hill.af.mil/.)

Part 207, DAC 91-12.

Part 209, Contractor Qualification

Part 217.70, Exchange of Personal Property

Part 242, Contract Administration

Part 246, Quality Assurance

Part 252, Solicitation Provisions and Contract Clauses

Defense National Relocation Program Employees Handbook

(Available from the DAD.)

Department of Defense Guide to Integrated Product and Process Development

(Available from the DAD.)

Department of the Army Cost Analysis Manual

(Available on the Internet at: http://www.asafm.army.mil/ceac.htm.)

Department of the Army Economic Analysis Manual

(Available on the Internet at: http://www.ceac.army.mil/.)

Deputy Assistant Secretary for Research & Technology, ASA(RDA), Memorandum

"Science and Technology (S&T) Development, Demonstration, and Transition Policy," dated March 25, 1998.

DI-PACK-80880A

Transportability Report (Available on the Internet at: http://www.acq.osd.mil/log/lro/cmdm_info/dids/didindex.html.)

DoD 1400.20-1-M

Program for the Stabilization of Civilian Employee Policies, Procedures, and Programs Manual

DOD 4120.3-M

Defense Standardization Program (DSP) Policies and Procedures

DOD 4120.15-L

Model Designation of Military Aerospace Vehicles

DoD 4140.1-R

DoD Materiel Management Regulation

DoD 4160.21-M

Defense Reutilization and Marketing Manual

DoD 4160.21-M-1

Defense Demilitarization Manual

DOD 4205.1-M

Selling to the Military

DOD 5000.3-M-2

Foreign Comparative Testing (FTC) Program Procedures Manual

DoD 5000.4-M

Cost Analysis Guidance and Procedures

DoD 5000.52-M

Acquisition Career Development Program

DOD 5010.12-M

Procedures for the Acquisition and Management of Technical Data

DOD 5200.1-M

Acquisition Systems Protection Program

DOD 5200.1-R

Information Security Program

DoD 5500.7-R

Joint Ethics Regulation

DoD 7000.14-R

DoD Financial Management Regulation, Volumes 2A and 2B

DoD Acquisition Workforce Personnel Demonstration Project Web Site (http://www.demo.wpafb.af.mil/)

DoDD 1430.13

Training Simulators and Devices

DoDD 3150.2

DoD Nuclear Weapon System Safety Program

DoDD 3222.3

Department of Defense Electromagnetic Compatibility Program (EMCP)

DoDD 4210.15

Hazardous Material Pollution Prevention

DoDD 4245.7-M

Transition From Development to Production

DoDD 4510.11

DoD Transportation Engineering

DoDD 4630.5

Compatibility, Interoperability and Integration of Command, Control, Communications, and Intelligence (C3I) Systems

DoDD 4630.8

Procedures and Compatibility, Interoperability and Integration of C3I Systems

DoDD 4650.1

Management and Use of the Radio Frequency Spectrum

DoDD 5000.1

Defense Acquisition (Available from the Internet at: http://www.acq.osd.mil/api/asm/product.html.)

DoDD 5000.4

OSD Cost Analysis Improvement Group (CAIG)

DoDD 5000.52

Defense Acquisition Education, Training, and Career Development Program

DoDD 5160.5

Responsibilities for RD&A of Chemical Weapons and CB Defense

DoDD 5160.62

Single Manager Responsibility for Military Explosive Ordnance Disposal Technology and Training

DoDD 5200.1

DOD Information Security Program

DoDD 5200.1-M

Security, Intelligence, and Counterintelligence Support to Acquisition Program Protection

DoDD 5530.3

International Agreements

DoDD 6050.1

Environmental Effects in the United States of DOD Actions

DoDD 6050.9

Chlorofluorocarbons (CFCs) and Halons

DoDD 6055.9

DOD Explosives Safety Board (DDESB) and DoD Component Explosives Safety Responsibilities

DoD Handbook 763

Human Engineering Procedures Guide

DOD Handbook SD-2

Buying Commercial and Non-developmental Items: A Handbook (Available on the Internet at: http://www.dsp.dla.mil/documents/sd-2.html.)

DOD Handbook SD-5

Market Research (Available on the Internet at: http://www.dsp.dla.mil/documents/sd-5.html.)

DoD Handbook SD-15

Performance Specification Guide (Available on the Internet at: http://www.dsp.dla.mil/documents/sd-15.html.)

DoDI 4715.4

Pollution Prevention

DoDI 4715.9

Environmental Planning and Analysis

DoDI 5000.58

Defense Acquisition Workforce

DoDI 6050.5

DoD Hazard Communication Program

DoDI 6055.1

DoD Occupational Safety and Health Program

DoD Joint Technical Architecture

DoD Security Certification and Accreditation Process for Information Technology (DITSCAP)

EIA/IEEE J-STD-016

Standard for Information Technology-Software Life Cycle Processes—Software Development: Acquirer-Supplier Agreement

Executive Order 11514

Protection and Enhancement of Environmental Quality

Executive Order 12114

Environmental Effects Abroad of Major Federal Actions

Executive Order 12196

Occupational Safety and Health Programs for Federal Employees

Executive Order 12856

Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements

Executive Order 12873

Federal Acquisition, Recycling, and Waste Prevention

FAR Part 3.104

Procurement Integrity

FAR Part 6.3

Other than Full and Open Competition

FAR Part 6.102

Use of Competitive Procedures

FAR Part 9

Contractor Qualifications

FAR Part 11

FAC 90-46

FAR Part 15.6

Unsolicited Proposals

FAR Part 42

Contract Administration

FAR Part 46

Quality Assurance

FAR Part 48

Value Engineering

FAR Part 52

Solicitation Provisions and Contract Clauses

FAR Part 52, clause 52.248-1

Value Engineering

Handbook for MANPRINT in Acquisition

(Available from the DAD.)

A “How-To Guide”

IEEE/EIA 12207.0-1996

IEEE/EIA Standard, Industry Implementation of International Standard ISO/IEC 12207: 1995 (ISO/IEC 12207) Standard for Information Technology—Software Life Cycle Processes

IEEE/EIA 12207.0-1997

Guide for ISO/IEC 12207:1995 Standard for Information Technology—Software life cycle processes-Implementation Considerations

IEEE/EIA 12207.1-1997

Guide for ISO/IEC 12207:1995 Standard for Information Technology—Software life cycle processes—Life cycle data

IS-632

EIA Engineering Standard

Joint Aeronautical Commander's Group

Performance Based Business Environment Products (Available on the Internet at: http:\www.wpafb.af.mil/az/ jacg/pbbe/pbbe.htm.)

Joint Requirements Oversight Council Administrative Instructions

Joint Technical Architecture Army (JTA-A)

(Available on the Internet at: http://arch-odisc4.army.mil/.)

Joint Travel Regulations

Managing the Environmental Risk: Applying the Environmental Analysis Process of the National Environmental Policy Act to Weapon System Acquisition Programs, June 1996.

Memorandum, ASA(RDA) (SARD-ZBA), Subject: ASARC Review Process, dated April 24, 1990.

Memorandum, Army Acquisition Executive and Assistant Secretary of the Army (Financial Management and Comptroller), and DISC4, Subject: Chief Information Officer and Department of Defense Program Assessment Requirements, dated November 14, 1997.

Memorandum, Army Acquisition Executive Directive, Subject: Munitions Survivability Requirements for the Design and Procurement of New or Modified Ammunition/Weapons, dated October 22, 1996.

Memorandum, Army Executive Agent for Insensitive Munition, Guidance, Subject: Munitions Survivability Requirements for the Design and Procurement of New or Modified Ammunition/Weapons, dated January 17, 1997.

Memorandum, Deputy Chief of Staff for Operations and Plans (DAMO-SSD), Subject: Nuclear, Biological, and Chemical Survivability Policy for Tactical Systems, dated September 25, 1997.

Memorandum, Under Secretary of Defense (Acquisition and Technology), Subject: Modeling and Simulation in Defense Acquisition, dated 16 March 1998

MIL-DTL-31000A

Technical Data Packages

MIL-HDBK-59B

Continuous Acquisition and Life-Cycle Support (CALS) Implementation Guide

MIL-HDBK 189

Reliability Growth Management

MIL-HDBK-248B

Acquisition Streamlining

MIL-HDBK-669

Handbook for Loading Environmental and Related Requirements for Platform Rigged Airdrop Materiel

MIL-HDBK-965

Acquisition Practices for Parts Management

MIL-HDBK-46855

Human Engineering Guidelines for Military Systems, Equipment, and Facilities

MIL-M-63005C

Preparation for Shipment of Army Aircraft

MIL-STD-209

Interface Standard for Lifting and Tiedown Provisions

MIL-STD-464

Department of Defense Interface Standard—Electromagnetic Environmental Effects for Systems

MIL-STD-810E

Environmental Test Methods and Engineering Guidelines

MIL-STD-814C

Requirement for Tiedown, Suspension Extraction Provisions on Military Materiel for Airdrop

MIL-STD-882C

System Safety Program Requirements

MIL-STD-910

Mobile Tactical Systems Overload Prevention Procedures

MIL-STD-913

Requirements for the Certification of Externally Transported Military Equipment by DOD Rotary Wing Aircraft

MIL-STD-961D

DoD Standard Practice Defense Specifications

MIL-STD-962C

Defense Standards and Handbooks

MIL-STD-963A

Preparation of Data Item Descriptions (DIDs)

MIL-STD-973

Configuration Management

MIL-STD-974

Contractor Integrated Technical Information Service (CITIS)

MIL-STD-1366

Interface Standard for Transportability Criteria

MIL-STD-1388-1A

Logistics Support Analysis

MIL-STD-1472E

Human Engineering

MIL-STD-1474D

Noise Limits, for Army Materiel

MIL-STD-1791

Designing for Internal Aerial Delivery in Fixed Wing Aircraft

MIL-STD-2105B

Hazard Assessment Tests for Non-Nuclear Munitions

MIL-STD-2105B

Hazard Assessment Test for Non-Nuclear Munitions

MIL-STD-2549

Configuration Management Standards

NATO Standardization Agreement 4439

NAVSO P-6071

Best Practices

Office of Personnel Management Qualification Standards for General Schedule Positions

OMB Circular A-11

Preparation and Submission of Budget Estimates

OMB Circular A-131

Value Engineering

Public Law 104-106

National Defense Authorization Act for Fiscal Year 1996, Section 4306, "Value Engineering for Federal Agencies

Request For Proposal Guide

(Available on the Internet at: http://www.sed.monmouth.army.mil/strategic/ then select "Acquisition Streamlining" then "RFP Guide.")

SB 700-20

Army Adopted/Other Items Selected for Authorization / List of Reportable Items

Simulation Support Plan Guidelines

(Available from ASA(ALT) (SAAL-DO) or the Internet at: http://www.sarda.army.mil/sard-zd/ssp.htm.)

TB 700-2

DoD Ammunition and Explosive Hazards Classification Procedures

Techical Architecture Framework for Information Management

Volume 6, DoD Goal Security Architecture (DGSA)

The Navy TurboStreamliner

(Available on the Internet at: http://www.acq-ref.navy.mil//turbo.)

The OSD CALS Office Joint Service CALS Reference Toolkit

(Available on the Internet at: http://www.acq.osd.mil/log/lro/toolkit/default.html.)

Title 5, U.S. Code, Appendix 2, Section 3

Federal Advisory Committee Act, Public Law 92-463, October 6, 1972

Title 10, U.S. Code, Chapter 87

Defense Acquisition Workforce (DAWIA)

Title 10, U.S. Code, Sections 2302-2315

Title 10, U.S. Code, Section 2366

Title 10, U.S. Code, Section 2399

Title 40, Code of Federal Regulations Parts 1500-1508

National Environmental Policy Act Regulations

Title 42, United States Code, Section 4321-4370d

National Environmental Policy Act

TRADOC Pam 71-9

Requirements Determination

TRADOC Reg 350-70

Training Development Management, Process, and Products

X-118C

Office of Personnel Management Qualification Standards Handbook

Section III
Prescribed Forms

This section contains no entries.

Section IV
Referenced Forms

AAE Form 02

Level III Certification Certificate

DA Form 2442

Level I and II Certification Certificate.

Appendix I
Consolidated Acquisition Reporting System Mandatory Procedures and Formats

Point of Contact: Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 103 Army Pentagon, ATTN: SAAL-ZD, Washington, DC 20301-0103

Information in DoD 5000.2-R applies.

Appendix II

Operational Requirements Document Mandatory Procedures and Formats

Point of Contact: HQDA, Deputy Chief of Staff for Operations and Plans, ATTN: DAMO-FDJ, 400 Army Pentagon, Washington, DC 20310-0400

References:

CJCSI 3170.01, “Requirement Generation System Policies and Procedures.”
AR 71-9, “Materiel Requirements.”
TRADOC Pam 71-9, “Requirements Determination.”

Information in DoD 5000.2-R applies. See the references for additional guidance.

Appendix III
Test and Evaluation Master Plan Mandatory Procedures and Format

Point of Contact: HQDA, ATTN: DACS-TE (TEMA), 200 Army Pentagon, Washington, DC 20310-0200

References:
AR 73-1, “Test and Evaluation Policy.”
DA PAM 73-2, “Test and Evaluation Master Plan Procedures and Guidelines.”

Information in DoD 5000.2-R applies. See the references for additional guidance.

Appendix IV
Live Fire Test and Evaluation Reports
Mandatory Procedures & Reports

Point of Contact: HQDA, ATTN: DACS-TE (TEMA), 200 Army Pentagon, Washington, DC 20310-0200

References:
AR 73-1, “Test and Evaluation Policy.”
DA PAM 73-2, “Live Fire Test and Evaluation Guidelines.”

Information in DoD 5000.2-R applies. See the references for additional guidance.

Appendix V

Major Automated Information System Quarterly Reporting Mandatory Procedures and Formats

Point of Contact: Director of Information Systems for Command, Control, and Communications (DISC4), ATTN: SAIS-IAA-Q, 107 Army Pentagon, Washington, DC 20310-0107

Information in DoD 5000.2-R applies.

Appendix VI

Earned Value Management Systems Criteria Mandatory Procedures and Reporting

Point of Contact: Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 103 Army Pentagon, ATTN: SAAL-ZD, Washington, DC 20301-0103

Information in DoD 5000.2-R applies.

Appendix VII
Guidelines For Army Acquisition Reform Strategic Planning

Point of Contact: HQDA, ATTN: SAAL-ZP, Skyline 6, Suite 309, 5109 Leesburg Pike, Falls Church, VA 22041-3201

Reference: Army Acquisition Reform Homepage at http://www.acqnet.sarda.army.mil/acqref/default.htm

Introduction and Purpose

This appendix provides guidance for doing strategic planning to implement the Army's Acquisition Reform (AR) strategy and institutionalize AR improvements. These guidelines apply to all Army organizations with an acquisition mission.

Army acquisition holds certain values to be true for all programs. The key values are:

1. Provide the warfighter what is needed, when it is needed, at the best available price.

2. Preserve the public trust in the acquisition system by exercising good judgment and adhering to the highest standards of honesty and professionalism.

3. Preserve America's global economic leadership by nurturing a vital, free, technologically superior national industrial base.

4. Preserve our military technological superiority while increasing the exploitation of commercial technologies and encouraging continuous, constant innovation.

The Army acquisition reform vision is to have an empowered, professional acquisition workforce that continuously innovates and improves processes to get the latest and best technology, goods and services, on time and at the lowest cost for our SOLDIERS.

Strategic Goals and Objectives

The Army AR strategy has eight STRATEGIC GOALS and associated STRATEGIC OBJECTIVES. The achievement of these goals is essential to implementation of the AR strategy.

1. Goal 1: DEFINE DESIRED OUTCOMES. The critical first step in the AR strategy is to clearly define desired outcomes. The following AR outcomes should be included in command planning. Outcomes unique to command operations should also be included.

   a. Objective 1.1. Streamlined management and efficient acquisition organization.

   b. Objective 1.2. Shortened development and fielding cycles for new technology.

   c. Objective 1.3. Reduced overhead and life cycle costs.

   d. Objective 1.4. Increased use of commercial products and services.

2. Goal 2. REMOVE BARRIERS TO BUSINESS JUDGMENT. An underlying principle of the strategy is the elimination of barriers to the use of good business judgment at all levels.

   a. Objective 2.1. Take full advantage of Federal Acquisition Streamlining Act (FASA) of 1994 and Federal Acquisition Reform Act (FARA) of 1995 and all AR Initiatives.

   b. Objective 2.2. Waive or seek relief from low value-added directives.

   c. Objective 2.3. Replace functional stove pipes with integrated product teams (IPTs).

   d. Objective 2.4. Involve fewer people and reduce formal coordination.

3. Goal 3. PROVIDE ACQUISITION TOOLS. The workforce must be provided the tools to smarter ways of doing business. As a minimum, the following tools should be used to implement AR.

   a. Objective 3.1. Utilize partnering and teaming.

   b. Objective 3.2. Utilize simplified acquisition procedures and credit cards.

   c. Objective 3.3. Maximize the use of information technology and electronic commerce.

   d. Objective 3.4. Utilize common processes and performance based contracts.

4. Goal 4. STREAMLINE PROCESSES. A vital element of AR is the redesign of processes and structures to eliminate non-value added layers and lengthy, linear processes.

a. Objective 4.1. Use integrated process action teams to conduct process analyses and identify bottlenecks and non-value added hierarchies and steps.

b. Objective 4.2. Reduce the number and size of regulations and policy documents by 50 per cent.

c. Objective 4.3. Reduce the number of hand-offs and reviews and establish clear and direct lines of responsibility and authority.

5. Goal 5. REDUCE OVERHEAD. The central thrust of this goal is to reduce both contractor and government overhead in the acquisition process and speed up the process to reduce costs.

a. Objective 5.1. Restructure organizations and processes by focusing on the customer.

b. Objective 5.2. Maximize the use of Single Process Initiatives and extend to service and base support contracts.

c. Objective 5.3. Reengineer and integrate the requirements, budgetary and testing processes into a streamlined acquisition team.

d. Objective 5.4. Consolidate and centralize acquisition functions, maximizing information technology, into acquisition centers of excellence.

6. Goal 6. EMPOWER INDIVIDUALS TO USE THEIR OWN JUDGMENT FOR BUSINESS DECISIONS. The central thrust of the Army AR strategy is entrusting the acquisition workforce to find smarter ways of doing business to achieve desired outcomes.

a. Objective 6.1. Delegate authority and reward results.

b. Objective 6.2. Encourage innovation by issuing guidance, not rules.

c. Objective 6.3. Support risk management, not adverseness.

d. Objective 6.4. Empower decision-making to the lowest possible management level.

7. Goal 7. PUT METRICS IN PLACE TO MEASURE PROGRESS. Elaborate reporting and feedback systems are counterproductive, but a few key value-added metrics are necessary to focus efforts and determine progress. AR metrics should be developed to support the command strategy, be directly related to measurement of outcomes, and measure progress in the following high payoff areas:

a. Objective 7.1. Measure the rapidity of technology insertion into fielded systems.

b. Objective 7.2. Measure increased use of performance specifications.

c. Objective 7.3. Measure the reduction in acquisition cycle and procurement lead-times.

d. Objective 7.4. Measure total cost reductions.

8. Goal 8. MANAGE FOR END RESULTS. A sharp focus on end results will change the old risk-adverse culture.

a. Objective 8.1. Focus on the customer and the product or service required.

b. Objective 8.2. Operate on the basis of trust.

c. Objective 8.3. Use past performance as a key factor.

d. Objective 8.4. Tailor oversight to performance risk.

Guidelines

1. Each acquisition organization conducts strategic planning to achieve the AR vision, goals, and supporting objectives.

2. Each acquisition organization develops its own approach to accomplish strategic planning for implementing AR. Strategic planning efforts are tailored to the organization's mission and customers.

3. Strategic planning for AR implementation should be linked to ongoing organizational processes by institutionalizing AR and making it a seamless, integral part of organizational culture.

4. Strategic planning for AR implementation defines organizational outcomes, identifies the AR tools to be used, establishes a process for implementation and removal of barriers, and focuses on organizational and individual empowerment. Planning efforts should focus on streamlining organizations, eliminating redundancy and non-value added work and reducing the cost of doing business.

5. Key metrics are used to measure accomplishment of goals and objectives. These metrics are tailored to provide a relevant and meaningful evaluation criteria for each organization based on it mission, goals and customer needs. In developing metrics, the focus should be on a minimum number of high-value measures

such as use of performance specifications, reductions in lead times and cycle times, total cost reductions, commercial utilization, and technology insertion.

6. Integrate actions developed from AR strategic planning into each organization's Reinvention Laboratory improvement plan where applicable. For organizations not designated as Reinvention Laboratories, include actions in AR Implementation Plan(s).

7. Integrate AR Initiatives currently underway into the AR strategic planning process.

8. Strategic planning provides direction and control for the following:

a. Identify and track AR improvements from inception to completion.

b. Budget and allocate resources for AR improvements.

c. Identify and use “Best Practices” to implement acquisition reform.

d. Track and assess metrics to measure progress and accomplishments.

e. Prepare and use AR “Lessons Learned” and “Success Stories” to promote institutional change.

f. Institutionalize AR improvements.

9. Strategic planning provides for resourcing the AR Implementation Plan(s) by identifying and budgeting for funding requirements in the planning, programming, budgeting and execution system (PPBES).

10. Document budgeted cost savings and off-budget cost avoidance attributable to implementation of AR improvements.

11. Establish an AR Home Page in each organization for use in disseminating information, tracking planning progress, and assessing achievements.

Procedures

Strategic planning is conducted as an iterative process consisting of four steps: assessment, strategy development, implementation and feedback.

1. Assessment analyzes the organization's purpose and operating environment and forecasts the future including what the organization should become — the organization's Vision.

2. Strategy development is the selection of the goals and objectives to achieve the VISION. Strategy development's product is the AR Improvement Plan(s).

3. Implementation is the execution of the Improvement Plan(s) and is the key strategic process. Implementation makes the Improvement Plan(s) happen at the right time, for the right reasons, and in a way that makes logical, efficient, and maximum use of all of the organization's resources. This requires the development and use of various tools. Improvement Plan(s) detailing the steps required to accomplish the objectives, the assignment of responsibilities, time frames for accomplishment, provision of resources, and monitoring accomplishment are essential for successful implementation.

4. Feedback is essential to measuring progress in achieving the strategy. This is a continuous and iterative process of measurement and adjustment. Central to effective and efficient feedback is high-value metrics that reflects the salient characteristics of the AR strategy.

The product of the strategic planning process is the AR Improvement Plan(s) that define specific improvements, enumerate tasks required to accomplish improvements, assign responsibilities, allocate resources, and establish management controls and milestones.

AR Improvement Plans cover a minimum of five years from the Fiscal Year in which they were developed and should be updated and revised annually.

Use cross-functional Process Action Teams (PATs) to accomplish strategic planning.

Maximize use of electronic data to keep the acquisition workforce informed, manage the planning process, and reduce cycle times and paperwork. Set up a web site AR Homepage, post Improvement Plan(s), and track metrics.

Use internal management control processes to manage achievement of Improvement Plan(s). Establish cross-functional management assessment teams to monitor improvement.

Organizational AR Functions

Army Acquisition Executive.

Subject to the authority, direction, and control of the Secretary of the Army, the Army Acquisition Executive (AAE) is the Army Executive Agent for AR.

Deputy Assistant Secretary of the Army (Procurement) (DASA(P)).

The DASA(P) plans, coordinates, and administers Acquisition Reform within the Army and appoints Army representatives to various corporate bodies.

Acquisition Reform Office (ARO) (SAAL-PPR).

As the knowledgeable, responsive focal point for the Army Acquisition Reform Executive Agent, this office develops, promulgates, facilitates, tracks, and evaluates the Army Acquisition Reform strategy.

Army Acquisition Organizations (AAOs).

Commanders and directors of acquisition organizations develop their Acquisition Reform strategic plans and supporting implementing plans, implementing AR Improvement Plans, removing barriers to reform, monitoring progress, and disseminating information on results.

Appendix VIII
Establishing Program/Project/Product Management Offices

Point of Contact: Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 2511 Jefferson Davis Highway, ATTN: SAAL-ZAC (Suite 10100), Alexandria, VA 22202-3911

Introduction and Purpose

This Appendix provides the guidance, criteria, organizational structure and process governing management of Army acquisition programs and establishment of a Program/Project/Product Management Office (PMO) position with responsibility for managing those programs.

Definition

Program—As used herein, an acquisition program is defined as any directed, funded effort designed to provide a new or improved materiel capability in response to a validated need. This applies to a weapons system, automated information system or any other materiel acquisition that has been referred to centralized management by a PM.

General Discussion

An acquisition program is designated for management by a PM when intensive centralized management of assigned missions, responsibilities, and authorities is required. Criteria and factors contributing to a program's designation for centralized management are provided in paragraph 3.3.6.4 of the Pamphlet. An acquisition program may be further designated for oversight by a Program Executive Officer (PEO) / Deputy for Systems Acquisition / PM when extension of the Army Acquisition Executive's (AAEs) dedicated acquisition oversight is required. The PM, as the Headquarters, Department of the Army (HQDA) management authority, manages and executes the total development, acquisition, system integration and fielding of an assigned program within approved cost, schedule, performance, and support requirements.

The title, “Program Manager,” “Project Manager,” “Product Manager” (PM) is used to identify only those individuals whose position is designated and approved by the AAE. A PM is a HQDA board-selected manager for an acquisition program and may be subordinate to either the AAE, a PEO, a Materiel Command Commander, a Deputy for Systems Acquisition (DSA), or another PM.

PM managed programs are categorized as either PEO Managed, Direct Reporting, or Non-PEO Managed. A PEO Managed program resides within the PEO structure and is managed by a PM subordinated to a PEO. Direct Reporting PM managed programs reside with PMs reporting directly to the AAE. Non-PEO Managed programs reside within the Non-PEO structure and are managed by PMs subordinate to MACOM, MSC Commanders, or for a DSA.

Guidance

Centralized management by a PM is mandatory when an acquisition program is designated as Acquisition Category (ACAT) I / ACAT IA, ACAT II, or ACAT III.

1. ACAT I and ACAT IA programs are managed by a PM who reports to the AAE either directly or through a PEO. The Under Secretary of Defense, Acquisition and Technology (USD (A&T)) designates MDAP programs as ACAT ID or IC. The Assistant Secretary of Defense, Command, Control, Communications, and Intelligence (ASD (C3I)) designates Major Automated Information System (MAIS) programs as ACAT IAM or IAC.

2. ACAT II programs are managed by a PM who reports to the AAE directly, through a PEO, through a Materiel Command Commander, or DSA as designated by the AAE.

3. ACAT III programs are managed by a PM who reports to a PEO, a Materiel Command Commander, or DSA as designated by the AAE.

4. ACAT IV programs are managed by an Army systems, logistics, or materiel command (MSC) systems manager rather than a PM. The designation procedures of an ACAT IV systems manager are left to the appropriate MSC.

General Criteria and Factors for Establishing a PMO

An acquisition program must have an approved Mission Needs Statement and a favorable Milestone decision, usually Milestone I, to be considered for centralized management by a PM. In addition, one or more of the following factors will contribute to the decision to establish a PM or assign a program to an existing PM:

1. Program operation and support cost, when compared to total life cycle equipment costs, are of such magnitude as to warrant centralized management.

2. Program has significant impact on U.S. military posture.

3. Program is required to satisfy an urgent requirement.

4. Program involves unusual organizational complexity, technological advancement, or interface control.

5. Program presents unusual difficulties that require centralized management.

6. Program requires extensive interdepartmental, national, or international coordination or support.

7. Program has significant Congressional, Department of Defense, or Department of the Army interest.

The criteria and factors above are equally applicable to all acquisition programs with the understanding that each AIS program decision will be reviewed on a case-by-case basis with consideration for the unique aspects of AIS programs.

Conditions for Establishing a Program Manager

An acquisition program is designated for management by a Program Manager (General Officer or Senior Executive Service civilian) when one or more of the following conditions exist:

1. The program requires centralized direction/coordination or two or more related developmental readiness efforts, projects, or products and each involves unusual organizational complexity, technological advancement, and/or interface control.

2. The program entails performance of a broad mission over a protracted period of time, is highly complex in nature, and involves substantial resources.

3. The development and deployment of the program significantly influences elements of national interest, other than purely military, for an extended period of time.

4. The program impacts the U.S. military posture greater than would normally warrant establishment of a Project Manager.

Conditions for Establishing a Project Manager

An acquisition program is designated for management by a Project Manager (Colonel or GS-15 civilian) when the program requires consideration of a broad array of factors such as mission critically; urgency of need; Congressional, DoD, or Army interest; organizational or technical complexity; and the system's life cycle costs.

Conditions for Establishing a Product Manager

An acquisition program will be designated for management by a Product Manager (Lieutenant Colonel or GS-14 civilian) based on the same criteria used for project management with the discriminating factors being weighted by such things as mission priorities, overall PM organizational structure, and relative program costs.

Preparation and Procedures for Establishing a PMO

The AAE is the approval authority for designating a program for intensive centralized management by a PM and for establishing the supporting PMO.

Requests by the materiel developer (MATDEV) or functional proponent for AIS to designate an acquisition program for intensive centralized management by a PM is submitted to the Assistant Secretary of the Army, Acquisition, Logistics and Technology (ASA(ALT)), ATTN: SAAL-ZAC. Requests may be submitted at any time and, depending on when received, will be treated as either an in-cycle or out-of-cycle request. Information supporting the requests is the same in both cases but the approval process will vary.

SAAL-ZAC will review in-cycle requests and develop the ASA(ALT) position for presentation to the PM General Officer Steering Committee (PM GOSC) as part of the annual review of PMs scheduled for replacement. The GOSC will then make its recommendations to the AAE. Out-of-cycle requests are reviewed by SAAL-ZAC with the position being developed and coordinated with the OASA(ALT) principals for concurrence. The recommendation is then presented to the AAE for approval. SAAL-ZAC develops and issues all tasks and directions to PEOs/MATDEVs to execute AAEs decisions to establish a PMO. SAAL-ZAC also notifies the USD(A&T) or the ASD (C3I) of the AAEs decision to establish a direct reporting PM.

The request should include the following information prepared in the formats provided herein.

1. Documentation of a favorable Milestone decision, usually Milestone I.

2. A narrative explaining why intensive centralized management is necessary in accordance with the criteria and conditions listed above. Proposals for programs that are not ACAT I/ACAT IA or ACAT II should be submitted only after all other management options are analyzed and rejected.

3. A justification that the proposed PM should be military or civilian and the rank or proposed grade level.

4. Estimated program funding by appropriation type (e.g., Research, Development, Test and Evaluation; Procurement; and Operations and Maintenance, Army (RDTE, PROC, and OMA)) for the Future Years Defense Plan.

5. The event or estimated date when the program will transition to a less intensive form of management. A discussion on transitioning programs from centralized management to functional management is in Appendix IX—Transitioning Systems From PM Centralized Management to Functional Management.

Request for a new PMO should also include a proposed manpower document and matrix support plan providing information as to how a management office to support the new Program/Project/Product Manager would be established. The information identifies the PMO core and matrix support manpower requirements and the source of those requirements. Current guidance is that total Army PM resource levels for manpower will realize zero growth. The PEO/MATDEV requesting a new PMO also identifies the PMO that will be disestablished to accommodate the new establishment.

Specific forms supporting each request are:

1. Program/Project/Product Manager Selection Criteria (Figure VIII-1)
2. Program Summary Sheet (Figure VIII-2)
3. Other Significant Program Information (Figure VIII-3)
4. Acquisition Position Restricted To Military Only (Use DD Form 2589, Sep 91)
5. Proposed organizational structure charts.

PM Chartering

Charters are issued to all centrally selected PMs, regardless of ACAT. The AAE creates and signs the charters. After signature, charters are forwarded to the appropriate PEO or Major Command (MACOM) Commander for signature and presentation. This process reinforces the chain of authority from the AAE through the PEO/MACOM Commander to the individual PM.

PROGRAM/PROJECT/PRODUCT MANAGER
SELECTION CRITERIA SHEET

PM Name _____

1. Brief description of program (One paragraph)
2. Brief description of Program/Project/Product Manager's responsibilities (One paragraph)
3. Desirable Characteristics
   a. Military Education
   b. Civilian Education
   c. Experience
   d. Security Clearance
   e. Branch/Functional Area/Branch/Series (Use of branch/functional Area designators to define the requisites of the position requires PEO/General Officer justification.)
   f. Other
4. Administrative Data
   a. Duty Station (Include the PMs UIC)
   b. MAPL (If position is already established)
   c. Report Date

Figure VIII-1. Sample Format for the Program/Project/Product Manager Selection Criteria

PROGRAM SUMMARY SHEET

(Title of Program)

(Major/Significant Non-Major/Non-Major)

PEO/DSA/MATERIEL
COMMAND _____

INCUMBENT:_____ ROTATION DATE:_____

NEW START DATE: _____

MISSION: (Brief description)

ACAT LEVEL (I/II/III) _____

PROGRAM MILESTONES:

I:

II:

III:

IV:

PROGRAM FUNDING (FY99-04 POM UPDATE):

MDEP:

PE/PROJ/SSN NUMBER		FY99	FY00	FY01	FY02	FY03	FY04
	RDTE						
	PROC						
	OMA						
	TOTAL						

MANPOWER END STRENGTH: (FY?? TDA)

CORE MILITARY _____ CIVILIAN _____

CO-LOCATED MATRIX: MILITARY _____ CIVILIAN _____

CONTRACTOR SUPPORT CO-LOCATED _____ NON CO-LOCATED _____

NOTE:

1. Submit one summary sheet for each PM position.

2. If more than one project shares a funding line, provide only the funding profile (breakout by PE/Project/SSN) for the PM position listed on the summary sheet. Identify customer funding separately.

Figure VIII-2. Sample Format for the Program Summary Sheet

OTHER SIGNIFICANT PROGRAM INFORMATION

1. Briefly address the following (if applicable):

a. Significant Congressional, Office of the Secretary of Defense, and/or Department of Army interests.

b. Significant impact on military posture and readiness.

c. Extensive interdepartmental, national or international coordination.

d. Unusual organizational complexity, technological advancement of interface controls.

e. Unusual difficulties requiring centralized management.

2. List the systems currently managed by the PM.

PM positions will be competed using the Best-Qualified PM Selection Board Process (compete military and civilian head-to-head). If you wish to reserve your position for fill by military, complete and attach a DD Form 2589.

Figure VIII-3. Program Information Supporting Requests to Establish a Program/Project/Product Manager

Appendix IX
Transitioning Systems From PM Centralized Management to Functional Management

Point of Contact: Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 2511 Jefferson Davis Highway, ATTN: SAAL-ZAC (Suite 10100), Alexandria, VA 22202-3911

Introduction and Purpose

This Appendix provides the guidance, procedures and format for transitioning weapon/automated information system programs from centralized management of a Program/Project/Product Manager (PM) to the functional management of an Army systems, logistics, or materiel command (Major Subordinate Command (MSC)).

Any agreement to transfer management responsibility for an acquisition program from centralized management by a PM to functional management by a MSC is reviewed and approved by the Army Acquisition Executive (AAE). For ACAT ID programs, the Under Secretary of Defense, Acquisition and Technology (USD(A&T) also reviews and approves the transition to functional management. The Assistant Secretary of Defense, Command, Control, Communications, and Intelligence (ASD(C3I)) reviews and approves Acquisition Category (ACAT) IAM programs for transition to functional management.

The AAE (SAAL-ZAC) reviews and approves a centrally managed program for transition to functional management six months after Initial Operational Capability (IOC) is achieved and every six months thereafter until the decision is made to transition or whenever the incumbent PM completes his/her tour.

Definition

Program—As used herein, an acquisition program or program is defined as any directed, funded effort designed to provide a new or improved materiel capability in response to a validated need. This applies to a weapons system, automated information system or any other materiel acquisition that has been referred to centralized management by a PM.

Transition Prerequisites, Factors and Criteria

Prerequisites for transitioning a program to functional management are that the program shall, at a minimum, have passed IOC, achieved full rate of production, and be logistically supportable as planned.

In addition to the foregoing prerequisites, one or more of the factors and criteria identified below also contributes to the decision to transition a program from centralized management to functional management.

- **Materiel Fielding**—Total Package Fielding Program for initial fielding is complete. Materiel Fielding Plans (MFPs) are complete. Program Supportability Strategy is complete without adverse impact on materiel fielding. The program is logistically supportable as planned. A full or conditional release is approved.
- **Automated Information System (AIS) Fielding**—AIS program fielding is well underway. Hardware and software are stable. Fielding teams can accomplish the mission working for the functional manager.
- **Production**—The program is in mature, stable production; does not anticipate additional technical risk; and does not include significant foreign military sales (FMS) activity.
- **Configuration Management**—The program is not subject to any major pre-planned product improvement or block upgrades that meet the dollar threshold for PM management. Modification kits are developed and have achieved stable production and application for major approved modifications.
- **Human Systems Integration**—All major issues concerning human factors engineering; systems safety; health hazards; or manpower, personnel and training are resolved.
- **Training System**—Training equipment is in place and certified. The training base is fully operational and meets training requirements.
- **Provisioning**—Long-term provisioning requirements are established and funding plans are in place.
- **Operational Readiness, Support, and Training Objectives**—Objectives are achieved.

- **Test and Evaluation/Product Assurance**—Quality assurance program is acceptable; all major Test Incident Reports are resolved; and Test, Measurement, and Diagnostic Equipment (TMDE) is in place and calibrated.
- **Threat**—The threat that the program is designed to counter is stable with no significant change expected.
- **Congressional/DoD/DA Issues and Interest**—Issues are satisfactorily resolved and/or there is limited or no Congressional/Department of Defense (DoD)/Department of the Army (DA) interest.
- **Financial Expenditures**—Risks associated with expenditures are minimal; funding plans, programs, and budgets are in place; and future funding is programmed and stable.
- **Environmental requirements**—National Environmental Policy Act (NEPA) documents (Environmental Assessment or Environmental Impact Statement) are complete and there are no unresolved/uncontrolled environmental hazards remaining.
- **Technical Data Package**—Technical Data Package (TDP) and Performance Specifications are stable, verified, and complete.
- **Claims**—Claims and contractor litigation issues linked to prior program phases are identified.

Preparation and Procedure

When the decision to transition a program from PM centralized management to MSC functional management has been made, the PM initiates the transition plan in accordance with the format provided at Figure IX-1. The plan is prepared in coordination with the gaining organization to which management responsibility will be transferred. The PM and gaining organization work through several programmatic areas that influence the effectiveness of the transition. Examples of the programmatic areas include funding, systems obsolescence, transfer of functional expertise, systems security, configuration management, and environmental program compliance. The plan should be submitted to the AAE / Milestone Decision Authority (MDA) for approval at least one year prior to the effective date of transition.

The Program Executive Officer (PEO) / Materiel Developer (MATDEV) and gaining organization coordinate on all aspects of the plan ensuring that the proper distribution of assets belonging to the program, including manpower spaces and personnel, is delineated in the plan. In the event that the PEO/MATDEV and gaining organization are unable to reach an agreement on distribution of assets, including manpower spaces, resolution is made at the Headquarters, Department of the Army (SAAL-ZAC).

SAAL-ZAC reviews the plan prior to approval by a MDA other than the AAE.

SAAL-ZAC initiates action to notify the USD(A&T) or ASD(C3I) of the proposed plan and gain their concurrence in the transition of ACAT ID or ACAT IAM programs to functional management.

When the AAE is the MDA, SAAL-ZAC reviews and coordinates all proposals for the transition of programs or PM Offices (PMOs) to functional management and provides recommendations to the AAE. Once the AAE makes the decision to transition, Army Acquisition Executive Support Agency (AAESA) develops and issues all tasks and direction to the PEOs and MATDEVs necessary to execute the AAEs decision. Unless the AAE directs a change, the program transitions to functional management on the approved date in accordance with the transition plan.

The PEO/MATDEV is responsible for ensuring that the planning, preparation and tracking of the execution of transition activities result in an orderly program transition.

Sample Format
Transition Plan

1. Purpose. Indicate name of program/system(s) to transition, gaining command, and the effective date.

2. Program/System Description. Include function and technical description of the program/system to transition.

3. Program Status. Include the life cycle phase.

4. Organizational Responsibilities. Identify those management responsibilities and tasks that the gaining organization will need to continue after transition. When appropriate, address any provisions required to facilitate the transition of the program/system from PM management to functional management. Areas to be addressed in this paragraph include the following:

Item Documentation and Records
Configuration Management
Engineering Responsibility, Engineering Data and Technical Data Package
Logistics Support
Software Fielding, Replication, Distribution, and Maintenance
Transportation and Packaging
Product Assurance Responsibility
Safety
Human Systems Integration
Security Classification Guidance
Environmental Documentation

5. Assumptions.

6. Contract Status. Open contracts/contractor(s)/time to completion/contract amount(s)/type dollars. Also include description of procurement activities, status of contracts, and contract-related responsibilities pertinent to the transition process.

7. Funding summary. RDT&E/Procurement/OMA/Future Year Defense Plan. Include portrayal of the overall budgeting and funding to include funds necessary for transition of the program/PMO and any anticipated future funding needs.

8. Personnel Summary. Include proposed disposition of all manpower spaces and personnel involved in the transition. When appropriate, include the schedule of proposed draw down of manpower spaces. Provide the personnel summary in the following formats:

TRANSFER MILITARY: (Current* Authorized) (On Board) (Required After**)
* Indicate if ODP/MAPL supported

TRANSFER CIVILIAN: (Current Authorized) (On Board Authorized) (Required After**)
** Identify the functions (as stated in item 4) of all personnel resources required after transition.

Figure IX-1. Sample Format for Program Transition Plan

FROM: TDA Para/Line: (Name)(Grade)(MOS/Series)(Branch/Pay Branch)
(PRC) (MAPL Number)

TO: TDA Para/Line: (Name)(Grade)(MOS/Series)(Branch/Pay Branch)(PRC)(MAPL Number)

9. Plan For Transition Actions/Milestones. Document the transition process. Identify tasks and milestones for activities involved in transition.

10. Agreements And Commitments. Identify any Memoranda of Agreement/Understanding that supports the program/system being transitioned.

COORDINATION:

_____ _____

(PEO/Materiel Developer) (Commander, MSC/Gaining Organization)

Automated Information Systems: _____

(Functional Proponent)

Headquarters, Department of the Army Review: _____

(ASA(ALT)/SAAL-ZAC)

APPROVAL: _____

(Army Acquisition Executive)

(Milestone Decision Authority other than AAE)

Figure IX-1. Sample Format for Program Transition Plan Continued

Appendix X
Disestablishing Program/Project/Product Management Offices

Point of Contact: Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 2511 Jefferson Davis Highway, ATTN: SAAL-ZAC (Suite 10100), Alexandria, VA 22202-3911

Introduction and Purpose

This Appendix provides the guidance, criteria, procedures, and format for disestablishing a Program/Project/Product Management Office (PMO).

Guidance

Disestablishment of a PMO occurs after management responsibility for all assigned programs have been either transition to functional management or terminated, or when directed by the Army Acquisition Executive (AAE). When a PM is responsible for more than one program, the successful transition or termination of one program will not result in PMO disestablishment provided the remaining program(s) warrant continued centralized management. AAE approval of PMO disestablishment is mandatory for both Program Executive Officer (PEO) and Non-PEO managed programs.

The Under Secretary of Defense, Acquisition and Technology (USD(A&T)) concurrence with the disestablishment of Acquisition Category (ACAT) ID PMOs and the Assistant Secretary of Defense, Command, Control, Communications, and Intelligence (ASD(C3I)) concurrence with the disestablishment of ACAT IAM PMOs is also necessary.

The AAE (SAAL-ZAC) reviews a PMO for disestablishment when the program is in mature, stable production with no anticipated additional technical risk or when the PM position is submitted to the Colonel or Lieutenant Colonel PM Selection Board to fill an anticipated vacancy.

Criteria

A PMO is disestablished when any of the following criteria exists:

1. The program objectives are achieved and the provisions of the transition plan are met.
2. The program objectives cannot be achieved.
3. The program objectives no longer meet the threat.
4. The technology no longer meets the operational requirement or is no longer economically supportable.
5. Funding support for the program is withdrawn.

A PMO may be disestablished when technology does not reflect continuing maturation and further centralized management is no longer warranted.

Procedures

Discrete actions to disestablish a PMO and the lead agency for each are:

1. Development of an approved PMO disestablishment/termination plan (PM lead).
2. Execute the plan (PM lead; the Army Acquisition Executive Support Agency (AAESA) and gaining system, logistics, or materiel command support).
3. Financial closeout or transfer of residual financial responsibility to gaining organization in accordance with the plan.
4. Disposition of manpower spaces and release or re-assignment of PMO personnel in accordance with the plan (AAESA lead).
5. Turnover of facilities, permanent documents, and documents of significant historical value (PM lead).
6. Disposition of PM owned wholesale (dormant) stock (PM lead).
7. Message disestablishing the PMO and identifying disposition responsibility for residual functions is released (AAESA lead).

When the decision is made to terminate a program and to disestablish the associated PMO, the PEO / Materiel Developer (MATDEV) initiates the disestablishment plan in accordance with the sample format provided at Figure X-1. The plan is prepared in coordination with the gaining system, logistic, or materiel command to which management responsibility will transfer. The plan is forwarded to the AAE at least six months

prior to the proposed effective date for disestablishment. Detailed procedures for PMO disestablishment should be tailored to the situation within the affected MATDEV and be reflected in the plan.

SAAL-ZAC reviews and coordinates all proposals for the disestablishment of PMOs and provides recommendations to the AAE. All tasks and directions to the PEOs/MATDEVs to execute the AAEs decision to disestablishment a PMO are developed and issued by SAAL-ZAC.

SAAL-ZAC initiates action to notify the USD (A&T) or ASD (C3I) of and gain their concurrence in disestablishment of ACAT ID or ACAT IAM PMOs.

Concurrently with initiation of the plan, the PM should report excess stock to the appropriate commodity managers for disposition and ensure arrangements are made for disposal/transfer of that stock.

Sample Format
Disestablishing Program/Project/Product Management Offices

1. Purpose. Indicate name of the Program/Project/Product Management Office, gaining command, and the effective date for disestablishment.

2. Program/System Description. Include function and technical description of the program/system to be terminated. Include the identification of salvageable technologies and other deliverables and any other pertinent issues that require approval.

3. Program Status. Include the life cycle phase.

4. Organizational Responsibilities. Identify those management responsibilities and tasks that the gaining organization will need to continue after disestablishment/termination. When appropriate, address any provisions required to facilitate the termination of the program/system from centralized management. Areas to be addressed in this paragraph include the following:

Item Documentation and Records
Configuration Management
Engineering Responsibility, Engineering Data and Technical Data Package
Logistics Support
Software Fielding, Replication, Distribution, and Maintenance
Transportation and Packaging
Product Assurance Responsibility
Safety
Human Systems Integration
Security Classification Guidance
Environmental Documentation

5. Assumptions.

6. Contract Status. Open contracts/contractor(s)/time to completion/contract amount(s)/type dollars. Also include description of procurement activities, status of contracts, and contract-related responsibilities pertinent to the disestablishment process. Address termination and/or modification of existing contracts to include termination costs and unliquidated obligations.

7. Funding summary. RDT&E/Procurement/OMA/Future Year Defense Plan. Include portrayal of the overall budgeting and funding to include funds necessary for program termination, PMO disestablishment, and any other anticipated future funding needs. Establish a timetable for withdrawal of program funds and address the status of funding actions that have an actual or contingent liability.

8. Personnel Summary. Include proposed disposition of all manpower spaces and personnel involved in the disestablishment including those required for completion of closeout activities and those available for reassignment. When appropriate, include the schedule of proposed draw down of manpower spaces. Provide the personnel summary in the following formats:

MILITARY: (Current* Authorized)(On Board)(Required After**)
* Indicate if ODP/MAPL supported

CIVILIAN: (Current Authorized)(On Board Authorized)(Required After**
** Identify the functions (as stated in item 4) of all personnel resources required after disestablishment.

Figure X-1. Sample Format Disestablishing Program/Project/Product Management Offices

FROM: TDA Para/Line: (Name)(Grade)(MOS/Series)(Branch/Pay Branch)

(PRC) (MAPL Number)

TO: TDA Para/Line: (Name)(Grade)(MOS/Series)(Branch/Pay Branch)(PRC)

(MAPL Number)

9. Plan For Disestablishment Actions/Milestones. Document the disestablishment process. Identify tasks and milestones for activities involved in disestablishing the PMO.

10. Agreements And Commitments. Identify any Memoranda of Agreement/Understanding that supports the PMO and/or program/system being disestablished. Address withdrawal from any agreement or understanding including international programs.

COORDINATION:

_____ _____

(PEO/Materiel Developer) (Commander, MSC/Gaining Organization)

Automated Information Systems: _____

(Functional Proponent)

Headquarters, Department of the Army Review: _____

(ASA(ALT)/SAAL-ZAC)

APPROVAL: _____

(Army Acquisition Executive)

(Milestone Decision Authority other than AAE)

Figure X-1. Sample Format Disestablishing Program/Project/Product Management Offices Continued

Appendix XI
Terminating A Program

Point of Contact: Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 2511 Jefferson Davis Highway, ATTN: SAAL-ZAC (Suite 10100), Alexandria, VA 22202-3911

Introduction and Purpose

This Appendix provides the guidance, criteria, procedures and formats for terminating Program Executive Officer (PEO)/Materiel Developer (MATDEV) managed acquisition programs from centralized management.

Definition

Program—As used herein, an acquisition program or program is defined as any directed, funded effort designed to provide a new or improved materiel capability in response to a validated need. This applies to a weapons system, automated information system or any other materiel acquisition that has been referred to centralized management by a Program Manager (PM).

Guidance

The appropriate Headquarters, Department of the Army (HQDA) staff element having program oversight (in other words, the Deputy for Systems Management and Horizontal Technology Integration, the Deputy of Combat Service Support, or the Director of Information Systems for Command, Control, Communications, and Computers) accomplishes program termination.

When terminated, the program may be returned to a technology-based command for further development; transferred to an Army systems, logistics, or materiel command to complete the close-out process; or retained in the PEO/MATDEV structure for continued centralized management but without the identity of a separate acquisition program. The Army Acquisition Executive (AAE) or MDA (for ACAT III and IV programs) will provide final direction on program termination.

The Under Secretary of Defense, Acquisition and Technology (USD(A&T)) concurrence with termination of ACAT ID programs and the Assistant Secretary of Defense, Command, Control, Communications, and Intelligence (ASD(C3I)) concurrence with termination of ACAT IAM programs is necessary.

Criteria

A program may be terminated when any of the following criteria exist:

1. Presidential, Congressional, Department of Defense (DoD), or Army Leadership decision.
2. The program objectives cannot be achieved.
3. The program objective no longer meets the threat.
4. The technology no longer meets the operational requirement or is no longer economically supportable.
5. Funding support is withdrawn.

Preparation and Procedure

When the decision is made to terminate a program but retain it in the PEO/MATDEV structure for continued centralized management without separate identity and no assets move outside of the PEO/MATDEV, the PM/WSM notifies HQDA, ATTN: SAAL-ZAC (for ACAT I and II programs) and the MDA (for ACAT III and IV programs) of the termination by memorandum/letter format. Notification should include the disposition of manpower assets and residual funding.

The PM initiates the termination plan in accordance with the sample format provided at Figure XI-1 when the decision is made to terminate a program from:

1. Centralized management and return it to a technology-based command for further development, or
2. Transfer it to an Army system, logistics, or materiel command to complete the closeout process.

The plan is prepared in coordination with the organization to which management responsibility will be transferred.

In addition, the plan at Figure XI-1 should be submitted to the AAE / MDA for approval at least six months prior to the effective date of termination.

The PEO / Materiel Developer (MATDEV) and gaining organization coordinate on all aspects of the plan and ensure that the proper distribution of assets belonging to the program, including manpower spaces and personnel, is delineated in the plan. In the event that the PEO/MATDEV and gaining organization are unable to reach an agreement on distribution of assets, including manpower spaces and personnel, resolution is made at the HQDA (SAAL-ZAC) for ACAT I and II programs and the MATDEV or DSA for ACAT III and IV programs.

SAAL-ZAC reviews the termination plan prior to approval by a MDA other than the AAE for ACAT I and II programs.

SAAL-ZAC initiates action to notify the USD (A&T) or ASD (C3I) of and gain their concurrence in the termination of ACAT ID or ACAT IAM programs.

When the AAE is the MDA, SAAL-ZAC reviews and coordinates all proposals for the termination of programs and provides recommendations to the AAE. Once the AAE makes the decision to terminate, the Army Acquisition Executive Support Agency (AAESA) develops and issues all tasks and direction to the PEOs and MATDEVs to execute the AAEs decision. Unless the AAE directs a change, the program terminates on the approved date in accordance with the termination plan.

The PEO/MATDEV is responsible for ensuring that the planning, preparation, and tracking of the execution of termination activities result in an orderly program termination.

Sample Format
Termination Plan

1. Purpose. Indicate name of program/system(s) to terminate, gaining command, and the effective date.

2. Program/System Description. Include function and technical description of the program/system to be terminated. Include the identification of salvageable technologies and other deliverables and any other pertinent issues that require approval.

3. Program Status. Include the life cycle phase.

4. Organizational Responsibilities. Identify those management responsibilities and tasks that the gaining organization will need to continue after termination. When appropriate, address any provisions required to facilitate the termination of the program/system from centralized management. Areas to be addressed in this paragraph include the following:

Item Documentation and Records
Configuration Management
Engineering Responsibility, Engineering Data and Technical Data Package
Logistics Support
Software Fielding, Replication, Distribution, and Maintenance
Transportation and Packaging
Product Assurance Responsibility
Safety
Human Systems Integration
Security Classification Guidance
Environmental Documentation

5. Assumptions.

6. Contract Status. Open contracts/contractor(s)/time to completion/contract amount(s)/type dollars. Also include description of procurement activities, status of contracts, and contract-related responsibilities pertinent to the termination process. Address termination and/or modification of existing contracts to include termination costs and unliquidated obligations.

7. Funding summary. RDT&E/Procurement/OMA/Future-Years Defense Plan. Include portrayal of the overall budgeting and funding to include funds necessary for termination of the program and any anticipated future funding needs. Establish a timetable for withdrawal of program funds and address the status of all funding actions that have an actual or contingent liability.

8. Personnel Summary. Include proposed disposition of all manpower spaces and personnel involved in the termination including those required for completion of close-out activities and those available for reassignment. When appropriate, include the schedule of proposed draw down of manpower spaces. Provide the personnel summary in the following formats:

MILITARY: (Current* Authorized)(On Board)(Required After**)
Indicate if ODP/MAPL supported

Figure XI-1. Sample Format Program Termination Plan

CIVILIAN: (Current Authorized)(On Board Authorized)(Required After**)

** Identify the functions (as stated in item 4) of all personnel resources required after termination.

FROM: TDA Para/Line: (Name)(Grade)(MOS/Series)(Branch/Pay Branch) (PRC) (MAPL Number)

TO: TDA Para/Line: (Name)(Grade)(MOS/Series)(Branch/Pay Branch)(PRC) (MAPL Number)

9. Plan For Termination Actions/Milestones. Document the termination process. Identify tasks and milestones for activities involved in termination.

10. Agreements And Commitments. Identify any Memoranda of Agreement/Understanding that supports the program/system being terminated. Address withdrawal from any agreement/understanding including international programs.

COORDINATION:

_____ _____

(PEO/Materiel Developer) (Commander, MSC/Gaining Organization)

Automated Information Systems: _____

(Functional Proponent)

Headquarters, Department of the Army Review: _____

(ASA(ALT)/SAAL-ZAC)

APPROVAL: _____

(Army Acquisition Executive)

(Milestone Decision Authority other than AAE)

Figure XI-1. Sample Format Program Termination Plan (continued)

Appendix XII
Assigning Popular Names

Points of contact:
U.S. Army Materiel Command, ATTN: AMCRDA-AP, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001
Director, Acquisition Policy (SAAL-RP), Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 2511 Jefferson Davis Highway (Suite 10036), Arlington, VA 22202-3911

References:
DOD 4120.15-L, "Model Designation of Military Aerospace Vehicles."
AR 70-50, "Designating and Naming Defense Equipment, Military Aerospace Vehicles."
AR 380-5, "Department of Army Information Security Program."

Introduction and Purpose

This appendix serves as a guide to the assignment and use of popular names for major items of equipment. Assignment of popular names should not be confused with the use of code words, nicknames, or short titles, as prescribed in AR 380-5.

A popular name is assigned to a major item of equipment for use in publicizing the item and for ready reference identification, for example KIOWA WARRIOR (OH-58D/Army Helicopter Improvement Program), AVENGER (Pedestal Mounted Stinger). Popular names should reflect functional characteristics and the Department of the Army's progress toward modernization of its concepts of warfare.

Popular names for Army equipment and aerospace vehicles should be requested when the system reaches production or has immediate prospects of going into the inventory (see AR 70-50). Do not change approved popular names unless there are compelling reasons (conformance with this guidance is not a compelling reason).

Final approval authority for assignment of popular names for military aerospace vehicles is the Office of the Secretary of Defense (OSD) Public Affairs. Approval authority for other Army major items of equipment is the Army Acquisition Executive (AAE). The AAE can approve exceptions to the suggested categories listed in the paragraphs below.

Procedures

1. Following is general criteria for use in selecting popular names:

a. Names should appeal to the imagination without sacrifice of dignity, and should suggest an aggressive spirit and confidence in the capabilities of the item. They should suggest mobility, agility, flexibility, firepower, and endurance when these characteristics can be related to the item.

b. Appropriateness should be judged primarily from the viewpoint of tactical application rather than source or method of manufacture of the item.

c. When names of persons are proposed, they should connote some association with the qualities and criteria indicated above.

2. Popular names for items in the following categories are based on the criteria set forth above:

a. Infantry weapons—Famous Americans. Example: MACARTHUR.

b. Field artillery weapons—action nouns. Examples: PALADIN, CONQUEROR, and PEACEMAKER.

c. Air defense artillery weapons—action nouns. Examples: AVENGER, STINGER, and VIGILANTE.

d. Tanks—American generals. Examples: ABRAMS and SHERIDAN.

e. Armored combat vehicles (less tanks)—animals associated with speed. Examples: CHEETAH, COUGAR, and PANTHER.

f. Antitank and assault weapons—vicious reptiles and insects. Examples: COPPERHEAD, SCORPION, and BUSHMASTER.

g. Army aircraft—Indian terms and names of American Indian tribes and chiefs. Examples: CHINOOK, APACHE, and COMANCHE.

h. Communications, electronic, and surveillance equipment—words descriptive of the function of the equipment. Examples: LONGBOW, SENTRY, and SCOUT.

i. Engineer mobility equipment—animals associated with building, construction, industriousness, or strength. Examples: FERRET, BADGER, and BEAVER.

3. The materiel developer (MATDEV) should coordinate proposed popular names with the combat developer and commanders of other major commands before submitting them to Headquarters, U.S. Army Materiel Command (HQ AMC).

4. The MATDEV should submit three proposed names (in order of preference) to the Commander, U.S. Army Materiel Command, ATTN: AMCRDA-AP, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001, along with a brief description of the system and its mission. If appropriate, a brief explanation of the proposed names should be included with the request. If only one name is submitted please provide a justification. A justification may also be included for your first choice, if deemed appropriate. Figure XII-1 provides the sample format for requesting assignment of a popular name.

5. HQ AMC should ensure a trademark search is conducted to determine whether there is any legal objection to the use of the proposed name. Proposed names are coordinated with the Air Force to ensure they are not already in use, and with the AMC Public Affairs Office concerning possible public relations impact. When proposed names include the name of an American Indian tribe or chief, HQ AMC should obtain concurrence/approval from the specific Indian tribe to use their name. Additionally, comments may be solicited from the Assistant Secretary for Indian Affairs, Mail Stop 4140, Bureau of Indian Affairs, Department of the Interior, 1849 C Street, NW, Washington, DC 20245.

6. HQ AMC should review the proposed popular names in accordance with these guidelines and forward those popular names that meet the established criteria to Headquarters Department of the Army (HQDA) (SAAL-RP) for coordination with the Army staff. SAAL-RP should prepare a recommendation and forward it to the AAE for approval.

7. HQ AMC should notify the MATDEV of the AAE decision.

8. The MATDEV should process the approved popular names through command channels and through information channels to provide adequate news media coverage (HQ AMC, Public Affairs Office, can provide guidance on news releases and publicity for new approved popular names).

9. Department of the Army requests for assignment of popular names to military aircraft, missiles, rockets and drones include the information required by AR 70-50 and are submitted to Commander, U.S. Army Materiel Command, ATTN: AMCRDA-AP, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001. The request should be coordinated as above and forwarded to U.S. Air Force Materiel Command (AFMC), ATTN: CASC/LGFD, for processing, assignment, and inclusion in DOD 4120.15-L, Model Designation of Military Aerospace Vehicles.

10. The MATDEV should maintain a file of approved popular names for equipment.

Sample Format for Requesting A Popular Name

(Use Letterhead Stationary)

MEMORANDUM FOR COMMANDER, U.S. ARMY MATERIEL COMMAND, ATTN: AMCRDA-AP, 5001 EISENHOWER AVENUE, ALEXANDRIA, VA 22333-0001

SUBJECT: Request for Approval of Popular Name for (name of system)

1. Request approval of popular name for (name of system). Following are proposed popular names in order of priority:

a. (Priority 1)

b. (Priority 2)

c. (Priority 3)

(Three proposed names should be submitted. Include a brief definition/description of the names, if appropriate.)

2. Give a brief explanation/justification for a single nomination. If deemed appropriate, include a justification for your first choice.

3. Enclosed is a brief description of the system and its mission. (Note: This is required for the trademark search.)

4. Point of contact is (name, office symbol, and telephone number).

Encl

Signature Block of
Requesting Authority

Figure XII-1. Sample Format for Requesting A Popular Name

Appendix XIII
Chief Information Officer Assessment Requirements

Point of Contact: Director of Information Systems Command, Control, Communications and Computers (DISC4), ATTN: SAIS-IAA-S, 107 Army Pentagon, Washington, DC 20310-0107

Reference: Memorandum from Army Acquisition Executive (AAE), Assistant Secretary of the Army (Financial Management and Comptroller), and DISC4, Subject: Chief Information Officer and Department of Defense Program Assessment Requirements, dated November 14, 1997.

In the past several years, Congress has enacted legislation intended to improve the management and performance of Federal Agencies. These laws include Division E of the Clinger-Cohen Act of 1996 (formerly titled the Information Technology Management Reform Act of 1996 and hereinafter referred to as the ITMRA), the Government Performance and Results Act (GPRA) of 1993, and the Paperwork Reduction Act (PRA) of 1995. Furthermore, recent guidance from the Office of Management and Budget (OMB) places added emphasis on managing investments, to include weapon systems.

The ITMRA applies to all information technology (IT) acquisitions, including IT supporting weapon systems and other National Security Systems (NSS). The appropriate Milestone Decision Authority (MDA) reviews NSS acquisitions to ensure they comply with applicable provisions of ITMRA. Sections 5123, 5125, and 5126 and 5113(b)(5) (except for subparagraph (B)(iv)) apply to all NSS. Initially, sections 5112, 5122, and the remainder of 5113 will apply to individual NSS except as determined not to be practicable on a case by case basis. Guidance to assist in making this determination will be developed by the offices of the DoD Chief Information Officer (CIO) and the Under Secretary of Defense, Acquisition and Technology (USD(A&T)).

The Army CIO (Director of Information Systems for Command, Control, Communications, and Computers (DISC4)) has been charged with the responsibility to recommend to the MDA whether to continue, modify, or terminate Army programs with IT/C4I impact. Per referenced memorandum, the CIO Assessment is required for all Acquisition Category (ACAT) I through IV programs. The Army CIO will review all ACAT I and ACAT II programs. The CIO assessment will be documented in the Modified Integrated Program Summary (MIPS). ACAT III and ACAT IV programs (with IT expenditures of $2 million or more in a single year or with a total life cycle cost of $30 million or more) will be evaluated by the organizations responsible for the CIO function at the Major Command. Program Managers will use these criteria on a continuing basis to evaluate their programs and will incorporate them into their acquisition processes, procedures, and documents.

The attached matrix correlates the ITMRA, GPRA, and PRA requirements with the other statutory and DoD regulatory acquisition requirements. In addition to these requirements, the matrix includes a list of high level items, questions (not inclusive) that need to be addressed and the criteria to be used to determine compliance with the requirements. These requirements will be applied, as appropriate, to each increment of incremental and evolutionary programs.

(The following asterisk note applies to the tables contained in the CIO and DoD Program Requirements beginning on the next page.)

* All statutory references in bold type are to Division E of the Clinger-Cohen Act of 1996, (formerly titled the Information Technology Management Reform Act (ITMRA) of 1996). All statutory references in Italics are to the Paperwork Reduction Act (PRA) of 1995. All regulatory “Part___” references are to DoD 5000.2-R unless accompanied by another reference. Division E of the Clinger-Cohen Act of 1996 Sections 5123, 5125, and 5126 apply to National Security Systems (NSS). The extent to which Sections 5112, 5113, and 5122 do not apply to individual NSS will be determined on a case by case basis.

CIO and DoD Program Requirements

1.

Program Requirement *(Short Title)*	Source of Requirement*		Milestone Applicability			
	Statutory	**Regulatory**	**0**	**I**	**II**	**III**
Does it support DoD Core/Primary mission functions? (core mission)	**Sec. 5123 (1),(3);** *Sec. 3501(10)*; GPRA	Part 2.3; CJCSI 3170.01	X	X	X	X

Does the program support DoD core/primary functions as documented in the DoD Strategic Plan, Army strategic plan and the Army Investment Strategy?

Has the CIO validated the MNS/ORD?

- Is there a TRADOC-approved Mission Needs Statement (MNS), Operational Requirements Document (ORD)?
- Are program outcome-oriented performance objectives and associated thresholds for improving effectiveness and efficiency of the mission identified in the ORD?

Describe program performance objectives and associated thresholds; any changes and the effect of these changes (Milestones I-III), as appropriate. Are the performance changes documented?

Potential Source of Information: MNS, ORD, DoD Strategic Plan, Army strategic plan, Army Investment Strategy.

CIO and DoD Program Requirements

2.

Program Requirement *(Short Title)*	Source of Requirement*		Milestone Applicability			
	Statutory	**Regulatory**	**0**	**I**	**II**	**III**
Is it an inherently government function? *(outsourcing)*	**Sec. 5113 (b)(2)(B)**	Parts 2.3.1, 2.4; OMB Cir A-76; FAR Subpart 7.5	X	X		

Did the Business Process Reengineering analysis consider the following?

- Can the process be eliminated?
- Can the process be accomplished more efficiently by another federal organization, e.g., another MACOM or even another organization within the same MACOM?
- Can the process or system be out-sourced in part or entirely?

Potential Source of Information: MNS, ORD, Analysis of Alternatives.

CIO and DoD Program Requirements

3.

Program Requirement *(Short Title)*	Source of Requirement*		Milestone Applicability			
	Statutory	**Regulatory**	**0**	**I**	**II**	**III**
Have work processes been re-designed to reduce costs and improve effectiveness (including benchmarking against comparable processes in other public or private organizations)? *(Business Process Reengineering (BPR)/benchmarking)*	**Sec. 5123 (4& 5)**	Parts 2.3, 2.4; OMB Cir A-130	X	X		

Were the mission-related and/or administrative processes thoroughly analyzed and redesigned, as appropriate, during concept exploration and prior to selecting the solution at Milestone II? Describe the redesign/reengineering process. Provide justification if the process(es) was not revised.

Describe how process performance was quantitatively benchmarked against other public/private processes in terms of cost, speed, productivity, and quality of outputs and outcomes. Describe how the benchmark results were utilized.

Potential Source of Information: MNS, ORD, Analysis of Alternatives.

Reference: Framework for Managing Process Improvement: A Guide to Enterprise Integration Dec 15, 1994 ASD(C3I) [http://www.dtic.dla.mil/c3i/bprcd/mguide.htm]

CIO and DoD Program Requirements

4.

Program Requirement *(Short Title)*	Source of Requirement*		Milestone Applicability			
	Statutory	**Regulatory**	**0**	**I**	**II**	**III**
Does it maximize use of COTS technology? *(COTS solution)*	**Sec. 5122 (b)(3), Sec. 5201;** 10 USC 2377; FASA Sec 8104	Parts 2.3, 3.3.2; FAR Part 12	X	X		

To what extent are (will) GOTS/COTS hardware and software used to satisfy the system requirements?

- Is there a plan for identification, evaluation and incorporation of reusable COTS or GOTS software products (requirements, domain models, architectures, designs, software development plans, data element descriptions, test plans, test data, etc.) in developing the system?
- Does the program require the reuse of specific COTS common software products (e.g., Common Operating Environment) in the system?

Potential Source of Information: MNS, ORD, Analysis of Alternatives, Army Enterprise Architecture, Acquisition Strategy.

Reference: Army Software Reuse Strategy.

CIO and DoD Program Requirements

5.

Program Requirement *(Short Title)*	Source of Requirement*		Milestone Applicability			
	Statutory	**Regulatory**	**0**	**I**	**II**	**III**
Does the projected ROI support this alternative? [ROI includes: improvements to mission performance, resource savings, or qualitative mission benefits] *(ROI)*	**Sec. 5122 (b)(3),(5);** 10 USC 2434; Sec. 3506 (h)(5)	Parts 2.3, 2.4, 3.5; OMB Cir A-130	X	X X	X	X

- Describe the criteria that were applied to support this alternative, including criteria related to the quantitatively expressed projected net, risk-adjusted return on investment and specific quantitative or qualitative criteria for comparing alternatives to obtain: improvements to mission performance, resource savings, or qualitative mission benefits.
- Is there an Analysis of Alternatives or Life Cycle Cost (and Benefit) Estimate that supports the selected alternative?
- Have meaningful and measurable performance measures (both output and outcome oriented) been defined and used to evaluate program status and achievement of ROI indicators, e.g., Benefit Investment ratio (BIR), Savings Investment Ratio (SIR), and/or Break-even point (BEP)?
- Do the selected economic indicators support the continuation of the program?
- For ACAT IA and special interest ACAT IIA programs at Milestone Decisions II and higher, is there an Army Cost Position, developed by the Cost/Performance WIPT, reviewed by the Cost Review Board, and approved by the ASA(FM & C)?

Potential Source of Information: ORD, Analysis of Alternatives, Cost Analysis Requirements Description (CARD), Life Cycle Cost (and Benefit) Estimate.

References: AR 11-18, DA Economic Analysis Manual, AIS Economic Analysis Guide.

CIO and DoD Program Requirements

6.

Program Requirement *(Short Title)*	Source of Requirement*		Milestone Applicability			
	Statutory	**Regulatory**	**0**	**I**	**II**	**III**
Are work processes, information flows, and technology integrated to achieve DoD strategic goals *(strategic goals)*	**Sec. 5123 (1),(5);** Sec. 3506 (b)(3)(C)	Parts 2.3, 2.6	X	X		

Is the program compliant with the DoD Information Technology Management Strategic Plan?

- Does the architecture address Joint interoperability?
- Have the program communications requirements been evaluated for sufficient capacity against the Army's planned/programmed communications infrastructure?
- Do work processes, information flows and technology described by an information technology architecture (a.k.a. Capability Configuration consisting of an integrated operational, technical and systems architecture) support the Army Enterprise goals and joint interoperability?

Potential Source of Information: Information Technology Management Strategic Plan, MNS, ORD

CIO and DoD Program Requirements

7.

Program Requirement *(Short Title)*	Source of Requirement*		Milestone Applicability			
	Statutory	**Regulatory**	**0**	**I**	**II**	**III**
Does it reflect DoD's technology vision? *(technology)*	**Sec. 5125 (b)(2);** Sec. 3506 (b)(2), (h)(1)	DoDD 4630.5; DoDI 4630.8; CJCSI 6212.01A;				
• Joint Technical Architecture (JTA)/DII COE		Parts 2.2.1, 4.3.5; 22 Aug 96 JTA Memo		X	X	X
• Technical Architecture for Information Management (TAFIM)		Parts 4.3.4, 4.3.8		X	X	X
Is the program compliant with the DoD technology vision and the JTA-Army? Potential Source of Information: IT Management Strategic Plan, Acquisition Strategy, C4I Support Plan Reference: Joint Technical Architecture—Army						

CIO and DoD Program Requirements

8.

Program Requirement *(Short Title)*	Source of Requirement*		Milestone Applicability			
	Statutory	**Regulatory**	**0**	**I**	**II**	**III**
Is it Year 2000 compliant? *(Year 2000)*	**Sec. 5122 (b)(3)**	16 Aug 96 Year 2000 Memo; 5 Nov 96 DIST Memo	X	X	X	X

What have you done to ensure that all parts of this software system will continue to function correctly in the year 2000 and beyond?

- Have all systems interfaces been considered as candidates for Year 2000 compliant evaluation during the systems development cycle?
- Does the systems development plan contain requirements/specifications for Year 2000 concerns?
- Has the Year 2000 compliance checklist been made part of the systems development package?
- Has the system been registered in the DIST with all possible Year 2000 data elements?
- Does the test plan contain a requirement for Year 2000 compliant testing?
- Has your system been subjected to a Year 2000 validation?
- Has it implemented the JTA-Army standards for Y2K?

Potential Source of Information: Acquisition Strategy, Defense Information Support Tools (DIST)

CIO and DoD Program Requirements

9.

Program Requirement *(Short Title)*	Source of Requirement*		Milestone Applicability			
	Statutory	**Regulatory**	**0**	**I**	**II**	**III**
Does it incorporate standards that enable information exchange and resource sharing while retaining flexibility? *(standards/flexibility)*	**Sec. 5122 (b)(3), Sec. 5202;** *Sec. 3504 (h)(1), (4)(B) Sec. 3506 (b)(1)(A);*	DoDD 8320.1-M;				
• Defense Information Infrastructure Common Operating Environment (DII COE)		22 Aug 96 JTA Memo		X	X	X
• Automated information collection/Continuous Acquisition and Life-Cycle Support (CALS)		Part 3.3.5.5; DFARS 207.105, 227, 252		X	X	X
• Software engineering ❑ Software reuse ❑ Software language ❑ DoD standard data		Part 4.3.5; DoDD 3405.1; DoDD 8320.1		X	X	X
Does it incorporate standards that enable information exchange and resource sharing while retaining flexibility? (standards/flexibility)						
• Electromagnetic Environmental Effects (E3) and Spectrum Management		Part 4.4.7; DoDD 3222.3; DoDD 4650.1; OMB Cir. A-11		X	X	X

Is there a documented plan or waiver for the system software to use the DII COE as a system foundation?

Does the program require on-line access to, or delivery of, programmatic and technical data in digital form (required on all new contracts beginning FY97)?

Has an architecture been developed that identifies and describes the required external system interfaces and associated characteristics?

Which implementation languages best support the internal software reuse, modularity, error detection, and error management required to make this project a success?

What languages, support tools, and coding practices have been selected to support future portability, enhancement, and reuse?

CIO and DoD Program Requirements (continued)

9.

Program Requirement *(Short Title)*	Source of Requirement*		Milestone Applicability			
	Statutory	**Regulatory**	**0**	**I**	**II**	**III**
Does it incorporate standards that enable information exchange and resource sharing while retaining flexibility? *(standards/flexibility)*				X	X	X

Are data standards implemented in compliance with the JTA-Army?

Is the appropriate frequency spectrum request approved?

Is spectrum-dependent equipment certified?

Is the equipment compatible with current DoD equipment and host nation requirements?

Potential Source of Information: Acquisition Strategy, Software Engineering Strategy.

Reference: Joint Technical Architecture—Army.

CIO and DoD Program Requirements

10.

Program Requirement *(Short Title)*	Source of Requirement*		Milestone Applicability			
	Statutory	**Regulatory**	**0**	**I**	**II**	**III**
Does it avoid/isolate custom-designed components? *(open systems)*	**Sec. 5201, Sec 5202 (a)**	Part 4,3,4; USD (A&T) Memo; Ar 70-1		X	X	X

Does the program limit custom-designed components to the maximum extent practicable, and implement JTA-Army compliant components?

- Does the probram identify, evaluate and incorporate reusable products (requiremtents, domain models, architectures, designs, software development plans, data element descriptions, test plans, test data, etc.) in developing the system?
- Does the contractor have a plan for the identification, evaluation and incorporation of reusable products (requirements, domain models, architectures, designs, software development plans, data element descriptions, test plans, test data, etc.) in developing the system?

Potential Sourse of Information: Acquisition Strategy

CIO and DoD Program Requirements

11.

Program Requirement *(Short Title)*	Source of Requirement*		Milestone Applicability			
	Statutory	**Regulatory**	**0**	**I**	**II**	**III**
Will it have fully tested pilots, simulation, or prototypes before production/deployment? *(OT&E)*	10 USC 2399	Part 3.4; AR 5-11			X	X

In what ways will (have) prototyping and simulation be (been) used to develop the software of this system?

Are risk reduction considerations documented in the approved TEMP?

- Does the test and evaluation strategy include modeling and simulation?
- Have any software simulators been used to test this system?
- If simulations are used, do they accurately reflect the IT architecture and can they be utilized to support training of the system?
- Is there a life cycle plan or transition plan for the simulators?

Potential Source of Information: TEMP, Software Engineering Strategy.

CIO and DoD Program Requirements 12.						
Program Requirement ***(Short Title)***	**Source of Requirement***		**Milestone Applicability**			
	Statutory	**Regulatory**	**0**	**I**	**II**	**III**
Are there clearly established measures and accountability for program progress? Are these measures linked to strategic goals? *(performance measures)*	**Sec. 5123 (1),(3),(4);** 10 USC Sec. 2220; Sec. 3506 (b)(2); GPRA			X	X	X
• Acquisition Program Baseline	10 USC 2220(a)(1), 2435	Part 3.2.2; AR 70-1		X	X	X
• Cost as an Independent Variable (CAIV) objectives		Part 3.3.4; DoDD 5000.1		X	X	X
• Milestone Exit Criteria	10 USC 2220(a)(1)	Part 3.2.3; AR 70-1		X	X	X
• Software measures		Part 4.3.5; 09/19/96 DISC4 Memo		X	X	X

CIO and DoD Program Requirements (continued)

12.

Program Requirement *(Short Title)*	Source of Requirement*		Milestone Applicability			
	Statutory	**Regulatory**	**0**	**I**	**II**	**III**
Are there clearly established measures and accountability for program progress? Are these measures linked to strategic goals? (performance measures)	**Sec. 5123 (1),(3),(4);** 10 USC Sec. 2220; Sec. 3506 (b)(2); GPRA					

Is the Acquisition Program Baseline (APB) approved?

Do the established roles and responsibilities, for organizations involved, ensure accountability for program progress? Provide documentation, i.e., Program Management Plan.

Does the Acquisition Program Baseline (APB) directly reflect ORD performance measures?

Is the APB (critical cost, schedule, and performance parameters) sufficiently defined for the current phase and are the related parameters realistic?

Are cost objectives defined and consistent with requirements programmed and projected fiscal resources?

Describe how the PMO manages to achieve cost objectives.

Describe how the contractors are managing to achieve cost objectives.

CIO and DoD Program Requirements (continued)

12.

Program Requirement *(Short Title)*	Source of Requirement*		Milestone Applicability			
	Statutory	**Regulatory**	**0**	**I**	**II**	**III**
Are there clearly established measures and accountability for program progress? Are these measures linked to strategic goals? *(performance measures)*	**Sec. 5123 (1),(3),(4);** 10 USC Sec. 2220; Sec. 3506 (b)(2); GPRA		X	X	X	X

Are program performance measurements established and linked to Army Enterprise goals and the ORD, accountability established, exit criteria identified in the Acquisition Decision Memorandum (ADM)?

What are the exit criteria for the current phase? What accomplishments in software development, testing, initial production, and life cycle support have been demonstrated?

What software metrics are used (and how are they used) to mitigate program risks?

Are the critical operational issues and criteria (COIC) based on the outcome and output-oriented performance measures documented in the ORD?

Potential Source of Information: MNS, ORD, APB, ADM, Acquisition Strategy, MAISRC Quarterly Report, Army Acquisition Performance Evaluation Report, Defense Acquisition Executive Summary.

CIO and DoD Program Requirements

13.

Program Requirement *(Short Title)*	Source of Requirement*		Milestone Applicability			
	Statutory	**Regulatory**	**0**	**I**	**II**	**III**
Is it supported by all intended users or sponsors? *(full funding)*	**Sec. 5122 (2)**	Part 2.5; DoDD 5134.1; OMB Cir A-11		X	X	X
Is the project or current increment fully funded and approved by all sponsors? Are the program plans and strategies consistent with overall DoD planning and funding priorities? Potential Source of Information: ORD, Affordability Assessment, POM, President's Budget.						

CIO and DoD Program Requirements

14.

Program Requirement *(Short Title)*	Source of Requirement*		Milestone Applicability			
	Statutory	**Regulatory**	**0**	**I**	**II**	**III**
Will it be implemented in a phased strategy (incremental, evolutionary, or blocks)	**Sec. 5202**	Parts 3.3, 4.3.5; FAR Part 39		X	X	X

What criteria were used in selecting the life cycle model (e.g., requirement stability, emerging technologies, need for user involvement in establishing system capabilities, funding profiles)?

What incremental (block) development and fielding strategies are proposed? How will this affect software development?

Potential Source of Information: Acquisition Strategy

CIO and DoD Program Requirements

15.

Program Requirement *(Short Title)*	Source of Requirement*		Milestone Applicability			
	Statutory	**Regulatory**	**0**	**I**	**II**	**III**
Does the acquisition strategy allocate risk between government and contractor? *(contract risk management)*	**Sec. 5201**	Parts 3.3.2, 3.3.5; OMB Circ A-131; FAR Parts 12 & 16		X	X	X

What contract vehicle(s) are being used to execute the program and how do these contract vehicles address potential risk areas?

Does the acquisition strategy consider risk sharing by government and contractors, and incentives for contractors to decrease cost?

What is being done to incentivize the contractor to accept or share the risk and produce reliable, supportable products?

Potential Source of Information: Acquisition Strategy, Contracts.

CIO and DoD Program Requirements

16.

Program Requirement *(Short Title)*	Source of Requirement*		Milestone Applicability			
	Statutory	**Regulatory**	**0**	**I**	**II**	**III**
Does it effectively use competition? *(competition)*	CICA; 41 USC 418; 10 USC 2318	Part 3.3.5.1; FAR 6.3		X	X	X

Is the acquisition strategy approved?

How does it achieve competition in all increments and life cycle phases?

Potential Source of Information: Acquisition Strategy.

CIO and DoD Program Requirements

17.

Program Requirement *(Short Title)*	Source of Requirement*		Milestone Applicability			
	Statutory	**Regulatory**	**0**	**I**	**II**	**III**
Are contract payments tied to accomplishments? *(earned value)*	*Sec.* 3506 (b)(2), (5)	Parts 3.3.5, 4.4.2		X	X	X

Describe the government and contractor jointly-developed contract work breakdown structure (WBS) and organizational elements that constitute cost, schedule or technical risk on the contract.

Is there a procedure in place: to periodically review and modify these risk areas; and to require the contractor to provide explanations of variances in these risk areas if they exceed pre-established thresholds?

Describe the basis on which costs are reimbursed and/or progress payments are made.

Potential Source of Information: Acquisition Strategy, Integrated Baseline Review, Contracts, Cost/Schedule Control Systems Criteria.

CIO and DoD Program Requirements

18.

Program Requirement *(Short Title)*	Source of Requirement*		Milestone Applicability			
	Statutory	**Regulatory**	**0**	**I**	**II**	**III**
Software Supportability Analysis		Part 4.3.3.1; AR 70-1; AR 700-127; AR 700-142		X	X	X

What is the life cycle software support concept (PPSS)?

- Has the post production software support transition plan been approved?

What provisions have been made, funded and executed to ensure the supportability of the software in the field, including the ability to respond rapidly to emergency change requests?

What are the plans and procedures for distribution of software during initial software development, transition, and software support stages?

Potential Source of Information: Acquisition Strategy, Transition plan, Software Engineering Strategy.

CIO and DoD Program Requirements

19.

Program Requirement *(Short Title)*	Source of Requirement*		Milestone Applicability			
	Statutory	**Regulatory**	**0**	**I**	**II**	**III**
Systems Safety, Software Quality, Software Testing.		Parts 4.3.7.3, 4.3.2, 3.4.1, 3.4.2, 3.4.5, 3.4.11			X	X

Have the software items (safety, quality, testing) whose failure could result in unintended death, injury, loss of property, or environmental harm been identified?

If there are software items whose failure could result in unintended death, injury, loss of property, or environmental harm, has a plan been developed to minimize or eliminate the potential impact of such items; i.e., will a fault-tolerant system strategy be devised?

What provisions are you making with the materiel command/LCSEC and OPTEC to ensure that materiel release will include certification that the software is considered suitable, effective and supportable for release to the field.

Does the operational guide describe potential conditions of failure, avoidance of the conditions, and remedy procedures required?

What quality metrics have been (will be) tracked? What software defects do you track (faults, failures, or both)? How do you use this information? What categories and priorities are used for software defects?

Describe how software evaluations are planned and performed prior to acceptance for operational use?

What is your software defect prevention concept; how will it be implemented?

What are the guidelines (safety, quality, testing) or thresholds on maximum number of defects or maximum defect densities that will be considered acceptable for each phase of T&E?

Have quality criteria been established for acceptance testing and DT&E, e.g., specific, quantitative requirements for maintainability, reliability, sustainability, human factors, safety, responsiveness, accuracy, capability to act in a degraded mode, etc., in regard to the software elements of the system?

Potential Source of Information: Safety strategy plan, Quality assurance plan, Test plans.

CIO and DoD Program Requirements

20.

Program Requirement *(Short Title)*	Source of Requirement*		Milestone Applicability			
	Statutory	**Regulatory**	**0**	**I**	**II**	**III**
Software Process Improvement		AR 70-1		X	X	X

How will you determine software program risk associated with the contractor's software process capabilities? Will you perform a software process risk assessment in the source selection in accordance with AR70-1?

How has the development organization's software process been tailored for this project to fit the selected development model(s)?

How will you conduct post-award evaluations to ensure the contractor maintains or improves its baseline of software practices?

How will you ensure that your prime contractor will properly manage the software subcontractors, and ensure that all contractual requirements and provisions (that are relevant) are flowed down to the first-tier and lower-tier subcontractors?

How will the prime contractors and the government maintain reasonable visibility into subcontractors' status, progress, and any problems?

Potential Source of Information: Software Engineering Strategy, Acquisition Strategy.

CIO and DoD Program Requirements

21.

Program Requirement *(Short Title)*	Source of Requirement*		Milestone Applicability			
	Statutory	**Regulatory**	**0**	**I**	**II**	**III**
Information Assurance	**Sec. 5123 (6);** *Sec.* 3504(g)	Parts 4.3.5 & 4.4.6; DoDD TS-3600.1; DoDD 5200.28	X	X	X	X

If security is an issue, has a security strategy been developed and described in a security model of the architecture that is traceable through requirements, design, implementation, and operating procedure documents?

Is there an approach that addresses how specific security features will be tested and certified (e.g., level of access, number of allowable passwords, response of system to an incorrect password)?

Is Information Security integrated into a Command and Control protect program with OPSEC, Electronic Protection, Intelligence, Counter PSYOPS and Deception, and Physical Security?

Potential Source of Information: Information assurance plan.

Reference: AR 380-19.

CIO and DoD Program Requirements

22.

Program Requirement *(Short Title)*	Source of Requirement*		Milestone Applicability			
	Statutory	**Regulatory**	**0**	**I**	**II**	**III**
Electronic Commerce (EC) Does the AIS Implement EC IAW legislative, Federal, Defense and Army Guidance?	**ITMRA; Public Law 103-355; Electronic Payments Act of 1996**	Draft DoD Dir—EC; Draft Army Strat Plan; Executive Order 13011	X	X	X	X

Has the MATDEV/Functional Proponent (FP) registered the AIS with the Army EC Office and been assigned an Army EC Office POC? (Registration required only once at the point of entry (0/I/II/III) into the process)

Have all Information Interfaces (information trading partners) been identified and documented?

Did the functional proponent (FP) identify all interface requirements in the CRD/ORD?

Has the MATDEV documented and identified any additional interfaces not documented in the CRD/ORD?

Has the MATDEV, in conjunction with the FP, developed and executed information interface agreements with appropriate information trading partners? (The MATDEV/FP should have a coordinated/signed agreement with each information trading partner that outlines how the interface will occur, frequency and format (i.e., EDI, tape, other.)

Does the MATDEV/FP participate in the appropriate Defense Working Group where it is necessary to employ EC standards in development and implementation of an AIS.

CIO and DoD Program Requirements (continued)

22.

Program Requirement *(Short Title)*	Source of Requirement*		Milestone Applicability			
	Statutory	**Regulatory**	**0**	**I**	**II**	**III**
Electronic Commerce (EC) Does the AIS Implement EC IAW legislative, Federal, Defense and Army Guidance?	**ITMRA; Public Law 103-355; Electronic Payments Act of 1996**	Draft DoD Dir—EC; Draft Army Strat Plan; Executive Order 13011	X	X	X	X

Has the MATDEV, in coordination with the FP, identified and become actively involved in the appropriate Defense working groups (where applicable)?

Has the MATDEV/FP identified and documented the system's requirements for use of the DII (i.e., communications, translations, etc.) and provided the requirements to DISA for review, analysis and scheduling?

Has the MATDEV/FP received certification from the Army EC Office that the AIS is not duplicating any other known Army AIS?—The Army EC Office certification is coordinated with the appropriate PSA.

Potential Source of Information: ORD, Statement of Work.

References: Fed Imp Guidelines, Draft DoD EC Strat & Imp Plan;.

Appendix XIV
The Clothing and Individual Equipment (CIE) Life Cycle Process

Point of Contact: HQDA, Office of the Deputy Chief of Staff for Logistics, 500 Army Pentagon, ATTN: DALO-TST, Washington, DC, 20310-0500

References:
AR 71-3, “Test and Evaluation Policy.”
TRADOC Pam 71-9, “Requirements Determination.”

Introduction

During its life cycle, Clothing and Individual Equipment (CIE) may pass through a System of four processes: (1) concept exploration, (2) program definition and risk reduction, (3) engineering and manufacturing development, and (4) production, fielding/deployment and operational support.

The CIE acquisition process involves either the development of new items or improvement to existing individual equipment. The former process requires up to 58 months to reach the full-scale production and deployment phase; the latter, depending upon the nature of the item and scope of the improvement, takes less time.

During the initial phases, Soldier and Biological Chemical Command (SBCCOM) Project Manager-Soldier (PM-SDR), the Training and Doctrine Command (TRADOC) Deputy Chief of Staff for Combat Development (DCSCD, and the TRADOC Systems Manager-Soldier (TSM-S) cooperatively seek to clarify, define, and prioritize the identified materiel deficiency.

1. The proponent determines the preliminary Basis of Issue (BOI).

2. PM-SDR, in coordination with the Soldier Systems Command Integrated Materiel Management Center (Soldier Systems Directorate (SBCCOM IMMC (SSD)), develops preliminary funding estimates and determines the appropriate fielding method.

By convening an Integrated Concept Team (ICT), TRADOC provides a forum in which the requirement can be examined. The ICT validates the requirement as a material shortcoming and produces appropriate recommendations. The ICT includes prospective members of an Integrated Product Team (IPT) that is assembled by PM-SDR, after the materiel requirement is validated, to manage the research, development, test and evaluation (RDT&E) and acquisition of the item.

1. With the up-front involvement of the Defense Supply Center Philadelphia (DSCP) (a Defense Logistics Agency (DLA) activity and member of the IPT), performance specification preparation and production contract planning can take place concurrently with production verification testing and delivery of production options to Force Priority 1&2 units under the development contract.

2. Upon successful completion of performance specification verification, the IPT transitions the required specification data and supply request package to the DSCP for full-scale competitive procurement and sustainment quantities of the new item/system/component. This “seamless transition to production” allows early fielding of the item to first-to-fight units as well as significant reduction in procurement lead-time.

3. DSCP continues the fielding once the initial production options on the development contract are exhausted.

4. For optional purchase uniform items, the Army Air Force Exchange Service (AAFES) should be included as a member of the IPT. AAFES procures optional purchase items for sale in Army Military Clothing Sales Stores (AMCSS). Coordination with AAFES is necessary to ensure that optional purchase items are producible, sustainable, and available.

Depending upon the method of fielding, PM-SDR provides funding to the SBCCOM IMMC (SSD) which then drops funded requisitions into the supply system, or PM-SDR will have identified earlier, necessary funding levels for MACOMs to be used for requisitioning the item from DSCP.

1. Throughout the item's service life, SBCCOM IMMC (SSD) monitors stockage levels maintained by DSCP to satisfy user demand. At five year intervals (or sooner), the technical data package (TDP) is reviewed to determine the continued utility of the item. If appropriate and cost effective, improvements of the basic design or component materials may be applied to extend the item's service life.

2. The SBCCOM (Natick Research, Development and Engineering Center (RDEC)) is also responsive to user requests for engineering investigation of any in-service CIE item. CIE items are replaced when they no longer conform to acceptable performance/safety/design standards.

Concept Exploration Phase (Phase 0)

The objective of the Concept Exploration Phase is to refine the materiel need and explore technical alternatives, concepts, and solutions. The significant events in this phase shape the entire acquisition effort and define the methods to be employed to resolve the materiel need. Significant events during the concept phase are:

Concept Origination ..... ICT/TSM-S/User Proponent/PM-SDR
Concept Evaluation..... ICT/TSM-S/User Proponent
Operational Requirements Document ..... ICT/TSM-S/User Proponent
Integrated Concept Team ..... ICT/TSM-S/User Proponent
Requirement Validation and Approval ..... TRADOC
Integrated Product Team ..... PM-SDR
Technical Assessment ..... Natick RDEC
Acquisition Strategy ..... IPT
Test and Evaluation Master Plan..... IPT T&E Subgroup
Program Acquisition Baseline ..... IPT
Army Uniform Board (AUB) Review ..... DA ODCSLOG
Concept Approval ..... CSA or CG SBCCOM

1. Concept Origination.

New requirements/concepts for CIE originate from a structured R&D environment that is defined by Army strategic battlefield planning as well as the existing/evolving technology base program.

TRADOC, in its role as combat developer, continually assesses force capabilities in 14 separate mission areas.

U.S. Army Materiel Command (USAMC), in its role as materiel developer, conducts technology base research that is guided by the Long-Range Research, Development and Acquisition Plan, as well as the Army Modernization Plan.

The user and R&D community's efforts are mutually supportive in creating a defined area of R&D requirements for various materials, including CIE. Additionally, user-generated requirements can enter the developmental process from equipment or materiel deficiencies, equipment performance reports, quality deficiency reports, or Army suggestions from the individual soldier. A materiel requirement may also originate as part of a broader Mission Needs Statement (MNS).

2. Concept Evaluation.

The TRADOC schools traditionally act as proponents for items intended to be used by military occupational specialties (MOSs) within their doctrinal purview. All initiatives, regardless of their origin, are first reviewed at the appropriate TRADOC school.

The objective of the initial assessment is to determine if the deficiency which the proposed new CIE item addresses is, in fact, a materiel deficiency rather than a situation which can be alleviated through training or doctrinal changes.

Confirmation of a materiel deficiency is a prerequisite before initiating the formal process of documenting a CIE requirement.

3. Integrated Concept Team (ICT).

The TSM-S and the proponent TRADOC school convenes an ICT meeting to scrub the performance and other requirements of the proposed acquisition of the new item. Because most CIE items are used across a wide area of MOSs, the new requirement is coordinated with other TRADOC schools. Close coordination with the PM-SDR and Natick RDEC during this process is necessary.

The objective of this effort is to achieve the desired performance parameters with technological possibilities. In addition to the performance characteristics, the TRADOC proponent school determines the basis of issue, and desired method of fielding, both of which have considerable impacts in funding the program.

Additional issues the ICT reviews/confirms include the results of the Manpower and Personnel Integration (MANPRINT) assessment (as applicable), as well as any unique supportability issues that may be associated with the materiel need being identified. If the ICT confirms that MANPRINT issues must be addressed, a System MANPRINT Management Plan (SMMP) is prepared.

If supportability issues must be resolved, it is noted so that a full assessment can be made by Natick RDEC as part of its technical assessment after an Operational Requirements Document (ORD) is approved. If necessary, a Supportability Strategy is prepared.

4. Operational Requirements Document Preparation.

Once the program requirements are determined by the ICT, the TRADOC proponent school prepares the ORD along with appropriate supporting documentation (for example, Operational Mode Summary / Mission Profile (OMS/MP) and Systems Training Plan (STRAP)), in accordance with TRADOC Pam 71-9.

The ORD is staffed worldwide and applicable comments are incorporated before it is finalized.

TSM-S and PM-SDR negotiates the relative priority of the project, based on operational requirements, available resources, and technological capabilities.

5. Requirements Validation and Approval.

Upon validation of the ORD, the proponent school/center finalizes and forwards it to HQ TRADOC (ATCD-SN).

The ORD is then staffed within TRADOC and submitted to CG, TRADOC for approval.

The approved ORD is then forwarded to PM-SDR as a formal materiel request.

6. Integrated Product Team.

When an approved ORD is received, PM-SDR appoints a Project Director (PD) who is empowered to represent the Project Manager and is responsible for the life cycle management of the project. The PD chairs the IPT and requests all other agencies that are involved in the program to appoint an IPT member who is empowered to represent his/her functional area.

The IPT usually consists of members from the TSM-S, proponent school, Natick RDEC, TECOM, OPTEC, SBCCOM IMMC (SSD), DSCP, AAFES (for optional items), and any other agency or functional area required. Also represented are the acquisition/contracting branches of SBCCOM and DSCP, and after contract award(s), applicable contractors.

Appointment to the IPT is on a permanent basis until the acquisition is complete. This will retain continuity of purpose and a consolidated forum of expertise that can facilitate the acquisition more expeditiously.

7. Technical Assessment.

The Natick RDEC responds to the requirements contained in the draft ORD with two basic assessments; a technological solution and the supportability of potential solutions.

The existing technology base, supplemented by the results of market surveys and investigation, forms the basis from which potential solutions emerge. DoD guidelines require consideration of existing (standardized) national and international items, followed by commercial items, non-developmental items, and modifications to them before considering development of a new item to satisfy the requirement. The assessment includes Industrial Capabilities studies as required by DoD 5000.2-R.

The Natick RDEC selects and procures potential candidates and subsequently, in close coordination with IPT, down-selects on the basis of each candidate item's ability to meet desired operational needs, supportability, safety, and cost. Performance trade-offs may be required to remain within acceptable risk and cost levels.

8. Acquisition Strategy.

The PD tasks the IPT to develop an Acquisition Strategy (AS) for each program. The primary goal of the AS is to serve as the roadmap for program execution and to outline the methods and procedures to minimize the time and cost of satisfying an identified, validated need.

The AS defines the entire program structure and discusses what must be developed, modified, tested, and procured, in terms of hardware, services, and documentation. In separate paragraphs it contains a program description, the management approach, the proposed materiel sources, a detailed cost breakdown, the proposed contracting approach, environmental, safety and health considerations, as well as logistics and training requirements. The AS includes methods to streamline, simplify, and shorten the acquisition process wherever possible. The AS includes Industrial Capabilities studies as required by DoD 5000.2-R.

The AS is a risk management tool that compares what is available in terms of products and technology with what is required by the ORD, and then describes the most economical methods to meet the requirement.

The AS is required for MS I/II decision approval.

9. Acquisition Program Baseline (APB).

The PD directs the IPT to prepare an APB at the initiation of each CIE program to document cost, schedule and performance objectives.

Using information from the ORD, as well as planning data developed by the IPT, and preliminary cost data provided by the Natick RDEC, the IPT selects critical parameters in each area.

The performance section of the APB reflects, as a minimum, the key performance parameters stated in the ORD. The baseline will, as a minimum, reflect program initiation, major milestone decision points, the expected fielding date, and other significant events.

The cost section separately identifies total program R&D and procurement cost. In addition, the total quantity of end-items planned for procurement and the acquisition unit cost per item will be shown.

The APB is required for MS I/II milestone decision approval.

10. Test and Evaluation Master Plan (TEMP).

Once the draft ORD is approved, the IPT chairman convenes a meeting of the team including representatives of the developmental and operational testing agencies to prepare a TEMP. The TEMP documents the test objectives, responsibilities, resources, and schedules for test and evaluation activities, critical operational issue and technical parameters, minimum acceptable operational performance requirements, evaluation criteria, and milestone decision points.

The test community's challenge is to condense its efforts to the minimum events necessary to verify the utility and safety of the item. Combined developmental and operational testing and test standardization should be maximized.

All agencies involved in the development, testing, and eventual use of the item must sign and indicate their concurrence with the provisions of the plan. Its signature page is required for MS I/II milestone decision approval.

11. Army Uniform Board (AUB) Review.

The AUB is the primary review forum for clothing bag, mess, dress, service, and optional purchase clothing items. The requirement for an AUB meeting is generated by the receipt at DA ODCSLOG of a milestone decision documentation package from PM-SDR. The request consists of a letter of transmittal, the AS, the APB, the approved ORD, and the executive summary and signature sheet of the TEMP, as well as an Acquisition Decision Memorandum (ADM) stating the decision requested.

Chaired by the DA DCSLOG, the AUB reviews the proposed CIE item to determine its general suitability, proposed wear policy, and coordinates its use among other services and the AAFES.

The AUB may request assistance for the review to clarify technical issues or explain unique program features. This is provided by PM-SDR with technical input from the Natick RDEC.

12. Concept Approval.

The Chief of Staff, Army, acts upon the AUB recommendations and serves as MDA for clothing bag, mess, dress, service, and optional purchase clothing items. Commander, SBCCOM is the MDA for organizational clothing and individual equipment (OCIE).

Approval indicates official Army acceptance of the program as stated in the milestone decision documentation package. Approval constitutes authorization to proceed to the Program Definition and Risk Reduction Phase (I) or the Engineering and Manufacturing Development Phase (II), depending upon the decision requested and program structure. Typically, programs requiring less than full developmental efforts proceed directly to Phase I/II. In that case, MDA approval authorizes the expenditure of 6.5 R&D funds. In the case of a more complex program, approval will authorize the expenditure of 6.4 R&D funds and entry into Phase I.

Concept approval is conveyed in the Acquisition Decision Memorandum (ADM).

Program Definition and Risk Reduction Phase (Phase I)

Most OCIE items will allow combining the Program Definition and Risk Reduction (PDRR) Phase (Phase I) with the Engineering and Manufacturing Development Phase (EMD) (Phase II). A combined Milestone I/II approval authorizes entry into the EMD Phase.

For those developmental programs involving new or complex OCIE items, Phase I is used to demonstrate potentially satisfactory performance characteristics of the proposed item as well as the production technology involved. This phase can also serve to select the most promising of a potentially large number of commercial items or non-developmental items (NDIs).

The Natick RDEC initiates the specified design effort by documenting the design and preparing prototypes for Phase I testing.

A safety analysis is conducted, and reliability / supportability issues assessed.

Any problems encountered during this phase are resolved within the IPT. Changes that affect basic requirements must be documented in a revised ORD by the TRADOC proponent school and approved by HQ TRADOC.

At the conclusion of this phase, a SBCCOM sponsored Milestone II IPR is held to confirm attainment of the phase objectives. The SBCCOM staff prepares an Independent Program Assessment of the program's readiness to proceed to the next phase, and the IPT prepares an Acquisition Decision Memorandum (ADM) for approval by the MDA, for entry into Phase II.

Engineering and Manufacturing Development Phase (Phase II)

Upon concept approval, the IPT implements the program as described in the approved AS. It is in this phase that the most promising design is translated into its physical characteristics and tested to verify its capability to meet the requirements. During this phase the contractor(s) join the IPT to participate in the resolution of technical issues. Significant events during this phase are:

Design Development ..... Natick RDEC
Contract Preparation..... IPT/Natick RDEC
Prototype Fabrication..... Natick RDEC
Design Review..... IPT
Developmental and Operational Testing..... TECOM/OPTEC
Modernization and Fielding Plans ..... SBCCOM IMMC (SSD)
IPT Input/ORD Modification ..... PM-SDR/TRADOC
IPT MS III Recommendation ..... PT
TRADOC Review..... TRADOC

1. Design Development.

If commercial items or NDI designs are proposed, design development consists primarily of selecting the optimum of two or more available solutions. If only one commercial or NDI design is under consideration, efforts are made to maximize its suitability.

The IPT monitors the design progress and preparation of prototypes. Technical issues are resolved between the user, developer and tester within the framework of the IPT.

Evolving designs for developmental items require the preparation of engineering drawings or master patterns. Sized patterns that satisfy the 5th through 95th percentile male/female requirements are produced through application of frequently updated anthropometric statistical data to the master pattern.

Commercial Item or Purchase Descriptions define commercial items or NDIs. Performance specifications define developmental non-clothing items.

2. Contract Preparation.

Most CIE items involve commercial development efforts. Development contracts are then prepared during the initial stages of the EMD Phase. This is primarily a function of the SBCCOM Acquisition Directorate, but requires close coordination with IPT members, particularly DSCP.

The program structure is developed by the IPT early in the program and has a direct bearing on the development contract. Issues such as the intended method of fielding (applicability of DMRD 903 funds) impact program funding requirements and define the need for production options to the development contract to satisfy initial fielding requirements.

Production options are a standard feature of OCIE development contracts. The SBCCOM Acquisition Directorate (AD) or DSCP may exercise them, which will procure follow-on requirements.

Technical issues such as horizontal technology integration (HTI), technology insertion, system modularity, pre-planned product improvements, and unique requirements for prototype production, phasing, GFE, or component are also considered. These issues are thoroughly reviewed and documented in the contract statement of work.

Developmental requirements are funded with 6.4 or 6.5 R&D funds, and production options with OMA production funds.

3. Prototype Fabrication.

The IPT monitors the preparation of prototypes of the item defined in the concept phase for evaluation. Depending on the chosen design, the fabrication of prototype items may be accomplished either in-house at the Natick RDEC facilities or commercially under a development contract. If appropriate and sufficient funding

is available, multiple contracts may be awarded. The resulting prototypes can then be down-selected to the optimum design.

4. Design Review.

Prior to procurement of the Developmental Test / Operational Test (DT/OT) test items, PM-SDR and Natick RDEC jointly sponsor a design review of the initial prototypes. This occurs within the framework of the IPT. Additional attendees may include OPTEC, TECOM, and other services(s) when joint programs are involved.

The object of the review is to verify that the item technically conforms to its specification and functionally performs as intended. Necessary tradeoffs are negotiated within the IPT to the satisfaction of the TSM-S and the proponent school. At this time, the ORD may have to be revised to apply modifications to the item. Desirable characteristics are thereby locked into the design before testing. Other issues, including supportability and producibility are also assessed. The latter may have to be verified in a production test during this phase.

The design review serves as an integrated test preview that determines the item's readiness for testing.

5. Developmental and Operational Testing.

After test prototypes have been procured by the SBCCOM Acquisition Directorate, they are provided together with a system support package (SSP) to the developmental testing (DT) and operational testing (OT) agencies where they are subjected to testing/ evaluation in accordance with the approved TEMP. DT/OT testing efforts are specifically tailored to produce the results required to verify the item's performance and technical characteristics. If necessary, a production test is also initiated in order to confirm producibility and obtain estimated production costs.

Developmental CIE items normally undergo a combined DT/OT unless unique capabilities, such as the item's ballistic response or chemical protection capacity, must be determined during a subsequent, second test phase. DT/OT methods for commercial or NDI items may involve an initial evaluation by Natick RDEC to select the most suitable items.

During DT/OT, the IPT monitors testing and applies modifications/corrections/ changes to items between test cycles if necessary. This eliminates the need for complete re-testing of items that may not have met a particular test criterion.

TECOM, upon completion of developmental testing, generates a developmental test report. OPTEC, upon completion of all testing (developmental and operational), generates a System Evaluation Report (SER) which addresses effectiveness, suitability, and survivability of the system for the Milestone Decision Authority for a Milestone III approval. (See DoD 5000.2-R and AR 73-1.) In addition, an independent technical assessment and independent proponent evaluation are prepared in order to summarize the test and evaluation of the item's suitability for MS III approval.

6. Modernization and Fielding Plans.

To plan for the fielding of a new OCIE item upon MS III approval, the SBCCOM IMMC (SSD) ARSO prepares a Materiel Fielding Plan (MFP) during the EMD Phase that is approved by the IPT.

As a general rule, non-critical OCIE items are issued by DSCPDPSC on a demand basis. Life support OCIE items are issued under the Central Funding and Fielding (CFF) method to Department of the Army-designated priority users through appropriate Central Issue Facilities.

The modernization plan supports a demand-based issue, and is initiated as early as the ICT, when the fielding method is determined. For a CFF issue, the initial modernization plan is converted or used as source data for the formulation of a MFP.

SBCCOM IMMC (SSD) ARSO prepares the fielding plan at least 12 months prior to MS III approval, detailing administrative requirements including the unit notification implementation, which is accomplished with a Memorandum of Notification (MON). Both plans address the disposition of residual items.

7. IPT Input / ORD Modification.

During the EMD Phase, the IPT may propose changes to the ORD in an effort to eliminate technical or other problems that cannot be economically resolved. When other services are involved, their representatives will join the IPT. The IPT reviews the problem and either negotiates corrective measures, recommend program termination, implement tradeoffs, or consider further development. This controlled process minimizes the proliferation of changes by establishing an audit trail for every change applied. A revised ORD is prepared by the TRADOC proponent school and approved by HQ TRADOC, if necessary, to reflect those changes, and other program documents are updated to reflect the changes.

8. Milestone (MS) III Recommendation.

With completion of the DT/OT test phases and availability of the test reports, the project focuses on the MS III decision process. To initiate this process, the IPT conducts a review of the item in terms of its capability to conform to the desired operational capabilities.

The IPT reviews the test and independent assessment/evaluation reports. In addition, safety and administrative preparedness to field the item are reviewed. The IPTs effort should produce a consensus regarding the items readiness for MS III approval that may be appropriate (in other words, type classified generic or standard).

Another important area of review is the item's producibility. Prior production history or the results of a production qualification test are prime indices. The IPT may also reach the conclusion that additional efforts are required prior to MS III approval. The conclusions of the review are forwarded to PM-SDR as a formal recommendation.

9. TRADOC Review.

Although TRADOC is represented on the IPT, the team's recommendations regarding MS III approval is forwarded to TRADOC by PM-SDR for formal concurrence indicating acceptance of the item by the user community.

Production, Fielding/Deployment and Operational Support Phase (Phase III)

During the production, fielding/deployment, and operational phase, the project emphasis shifts to the production and fielding of the item. If a production option was exercised, it will be implemented upon MS III approval by the MDA. The IPT coordinates the procurement and fielding of the item in accordance with applicable fielding plans. SBCCOM IMMC (SSD) assists in determining quantity requirements. The Natick RDEC extends technical assistance to resolve production problems, as well as sustaining engineering support.

The Natick RDEC retains technical support responsibility for fielded CIE which continues until the item is phased out of service or undergoes a product improvement. Significant events are:

Technical Data Package ..... Natick RDEC/DSCP/AAFES
Supply Request Package/Supply Support Request ..... SBCCOM IMMC (SSD)
Implement Fielding Plans ..... SBCCOM IMMC (SSD)/MACOMs
Effective Date of Supply (EDOS) ..... DSCP/AAFES
First Unit Equipped (FUE) ..... SBCCOM IMMC (SSD)/DSCP
Post Fielding Review ..... IPT
Sustaining Engineering Support ..... Natick RDEC

1. Technical Data Package (TDP).

During the previous phase, Natick RDEC and DSCP have cooperated in the preparation of an appropriate draft specification for the item. DSCP finalizes the specification upon MS III approval. Simultaneously, Natick RDEC also provides master patterns or engineering drawings to DSCP and to AAFES (for optional purchase items).

A TDP transition letter is provided to SBCCOM IMMC (SSD); formally transitioning the item to the procurement phase. This letter provides information concerning the tariff, potential suppliers, estimated unit cost, production base, quality assurance, and testing requirements.

When completed, the TDP contains a description of the item in both narrative and graphic form, and in sufficient detail to facilitate manufacture of the item. The package includes, as applicable, production engineering drawings, sized master patterns, military or performance specifications, or commercial item/purchase descriptions.

2. Supply Request Package (SRP) / Supply Support Request (SSR).

SBCCOM IMMC (SSD) prepares an SRP/SSR to outline the Army's quantitative peacetime requirements for fielding CIE items and to furnish the technical data required for procurement. The package also includes a DMRD 903 funding estimate, if appropriate, as well as separate requirements for pre-positioned and other war reserve stocks to be maintained. SBCCOM IMMC (SSD) coordinates the SRP/SSR with the appropriate DLA procurement activity (for example, DSCP or DGSC) or the General Services Administration (GSA), and PM-SDR.

3. Implement Fielding Plans.

SBCCOM IMMC (SSD) prepares a draft Materiel Fielding Plan (MFP) for CFF fielded items during the EMD Phase and forwards it to the PM-SDR for approval. After coordination with HQDA, PM-SDR approves the MFP. SBCCOM IMMC (SSD) staffs the approved MFP with the MACOMs of the gaining commands at least one year prior to the First Unit Equipped (FUE) date. Designated units are then notified of the fielding

schedule. Actual issue of the new item occurs through the servicing CIFs. MACOMs are kept informed of items to be fielded through the New Item Introduction Status reports prepared by the SBCCOM IMMC (SSD). For a demand-based issue, a modernization plan is used, and DLA or GSA furnishes an effective date of supply (EDOS).

4. Effective Date of Supply (EDOS).

The EDOS is established by DLA or GSA, and indicates the date on which funded requisitions for a demand based item will be honored from authorized users. It is based upon the attainment of stockage levels deemed sufficient to satisfy user demand and war reserve requirements. Attainment of EDOS marks the conclusion of the production and deployment based fielding phase of the project. For optional items, it is the date that the item will be available for sale in AMCSSs.

5. First Unit Equipped (FUE).

The FUE date is applicable to CFF fielding of life support OCIE items. It indicates the date of completion of issue for the first of the designated units to be supplied with the new item. As indicated previously, SBCCOM IMMC (SSD) prepares the MFP/MON draft 12 months prior to expected type classification. Administrative planning for transition of the item to DSCP and its procurement and funding are planned accordingly. The attainment of FUE marks the conclusion of the production and CFF fielding phase of the project.

The Natick RDEC retains technical support responsibility for fielded CIE which continues until the item is phased out of service or undergoes a product improvement.

6. Post Fielding Review.

The combat and materiel developers use a variety of feedback mechanisms to gather performance/ durability data on fielded CIE items. Shortcomings or deficiencies that inhibit proper performance of CIE items are corrected through the use of Quality Deficiency Reports (QDRs) and Equipment Improvement Recommendations (EIRs). Production problems become evident through high rejection rates as a result of QA tests. A reliable measure of durability is the replacement rate for an item. Frequently, examination of turned-in items can isolate problem areas requiring correction. Post-fielding reviews also continue to be conduced at five-year intervals to determine continued cost-effective CIE performance.

7. Provide Sustaining Engineering Support.

The Natick RDEC remains responsive to requests for engineering support on CIE throughout its life cycle. Most support involves technical inquiries, investigations of anomalies, application of engineering change proposals submitted by industry to either improve the design, fabrication process, or lower end item costs.

Soldier Enhancement Program

Several areas of material requirements have such unique circumstances that singular processes have been developed for the requirement definition and /or acquisition. One of these areas is the Soldier Enhancement Program (SEP). The SEP encompasses all items worn or carried by soldiers in a tactical environment, and is designed to improve/enhance the soldier's lethality, command and control, sustainability, mobility and survivability. Basically, the SEP follows the same materiel acquisition process as previously described for CIE. The major thrust, however, of the SEP is to identify and evaluate commercially available individual weapons, munitions, combat clothing, individual equipment, food, water, shelters, communication, and navigation aids in order to get successful items into the hands of the soldier in less than three years.

Proposals for the SEP can be generated by anyone and go before the SEP Review Council of Colonels at least twice each year. The CG, TRADOC approves all SEP proposals and priorities and forwards to HQDA ODCSOPS for ARMY prioritization and funding. After CG, TRADOC approval of the SEP proposal, the originating school may begin processing the SEP ORD. School Commandants have been delegated approval authority for SEP ORDs. The ORD format is used, but is streamlined to the maximum extent possible so that it only contains necessary operational requirements tailored to that individual system. Approval guidelines for SEP follow the same procedures as for CIE as described earlier for Phase 0 and Phase II.

Appendix XV
Management of PM Owned Wholesale Stock

Point of Contact: Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 2511 Jefferson Davis Highway, ATTN: SAAL-ZAC (Suite 10100), Alexandria, VA 22202-3911

References:
DoD 4140.1-R, "DoD Materiel Management Regulation."
DFAR Supplement 217.70, "Exchange of Personal Property."

Introduction and Purpose

This Appendix provides the guidance and procedures for management of Program/Project/Product Manager (PM) owned wholesale (dormant) stock.

Guidance

On a semi-annual basis, the item manager (IM) should request a printout of Op Code 9 stock by project code. This stock resides in sector/segment 0502 of National Stock Number Master Data Record.

Printouts should be provided to cognizant PMOs for review.

Six months prior to disestablishment of a PMO, or termination of a supporting project code, PMs should report excess stock to the appropriate commodity mangers for disposition and ensure arrangements are made for disposal/transfer of the stock. The procedures below provide a checklist that may be used as a management tool.

Procedures

Upon receipt of the printout for either the semi-annual review or for disestablishment/termination of the PMO, the PM/IM should review on-hand assets in relation to the current fielding schedule and

1. Validate the current fielding schedule, quantity, and dates for accuracy.
2. Provide the IM and Total Package Fielding (TPF) team with updated information if the fielding schedule, quantities, and/or dates have changed.
3. Identify changes in failure rates, maintenance concept, etc., which would cause a reduction in spare parts requirements.
4. Conduct the review in relation to the latest and greatest configuration.
5. Determine if the on-hand assets are part of the latest configuration.
6. Program Modification Work Orders (MWO) for those items that can be modified to the latest configuration.
7. Prepare and provide disposition instructions for items that will not or cannot be modified.
8. Dispose of all spares that are not modifiable to a usable configuration.
9. Prepare disposition instructions if Low Rate of Initial Production models remain on-hand.
10. When authorized equipment is to be replaced by a similar item, do not turn-in the existing item or order the replacement item until it has been determined that the current item cannot be exchanged as part of the acquisition of the replacing identical or similar item. See DoD 4140.1-R, C6.2 and Defense Federal Acquisition Regulation Supplement 217.70.
11. Review program for current and anticipated Foreign Military Sales (FMS) support. Identify current customers and cases currently being written for new customers. Determine availability of spare assets for sale to these customers from OP Code 9 stock.
12. Determine configuration of the equipment currently used by the potential FMS customer and nature of upgrades to be received (comparable to US equipment?); nature of spare parts support; location or site where equipment modifications will be performed; availability of supporting installation kits, test measurement and diagnostic equipment (TMDE), etc.

For major items, Associated Support Items of Equipment (ASIOE), and configuration management item (CMI), the PM should:

1. Provide data interchanges to the IM.

2. Identify and notify the IM of any significant changes in deployment occurring since the last data interchange.

3. Review contracts for impact of changes to deployment schedules and/or density.

4. Review requirements documents with the Training and Doctrine Command (TRADOC) to ensure that right sizing of the Army is reflected in procurements and data interchanges.

Other actions the PM should take include but not limited to:

1. Offer excess assets back to the original owners or commands.

2. Determine if dollars or parts are available and schedule unserviceable assets (cc F) for maintenance.

3. Deliver uneconomically repairable (cc H) assets to Defense Reutilization Management Office (DRMO) for disposal.

4. Prepare plans for disposal of Special Tools and Test Equipment (STTE), Installation Kits, and MWO Kits not otherwise required for fielding.

5. Prepare plans for disposal of ASIOE, STTE, Installation Kits, industrial plant equipment, etc. when the contract is complete or terminated.

Appendix XVI
Materiel Status Record

Points of contact:
U.S. Army Materiel Command, ATTN: AMCRDDA-TE, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001
Commander, U.S. Army Force Management Support Agency, RDD, ATTN: MOFI-F-MR-DO, Ft. Leavenworth, KS 66027-1344

Reference:
AR 708-1, "Cataloging of Supplies and Equipment Cataloging and Supply Management Data."

Introduction and Purpose

This section describes the procedures for submitting information pertaining to type classification or reclassification; changes in nomenclature, national stock numbers and line item numbers, and recording data in the Materiel Status Record (MSR). Common Table of Allowances (CTA) items not having personnel, maintenance, or training impact are exempt from MSR submission.

The Materiel Status Office (MSO) receives, coordinates, maintains and distributes the materiel status actions reported by the materiel developers (MATDEV). (Headquarters, U.S. Army Materiel Command (HQ AMC), AMCRDA-TE is the designated MSO for the Army.)

MSR submissions are compiled and recorded by the MSO in the MSR. Each separate action or decision is assigned a unique MSR Number. Actions are compiled over a 2-month period and are distributed every other month by the MSO to Headquarters, Department of the Army (HQDA) and the Materiel Developers (MATDEVs).

The MATDEV should report any of the following items that apply to decisions or actions being recorded:

1. Section 1 — Decisions pertaining to type classification or reclassification of materiel.
2. Section 2 — Assignment and/or changes in national stock numbers, nomenclature of type classified items, or line item numbers.
3. Section 3 — Corrective Actions.

Procedures

1. The MATDEV forwards the results of the type classification decision within 15 working days from the decision date through the U.S. Army Force Management Support Agency (USAFMSA-RDD), ATTN: MOFI-FMR-DO, to HQ AMC, ATTN: AMCRDA-TE, for recording in the MSR.
2. Army operational commands, agencies, and activities having development, logistics, supply management allowance or reporting responsibilities, submit a request for automated transaction (Change to Army Adopted Items of Materiel and List of Reportable Items SB 700-20, DA 3141) to LOGSA. LOGSA prepares and submits the automated transaction required to update and maintain the Army Adopted Items of Materiel and List of Reportable Items, SB 700-20.
3. HQ AMC verifies automated transactions submitted by LOGSA and releases to HQDA.

Format

The sample format for and information included in the MSR submission cover letter is shown in Figure XVI-1. The following items should be enclosures to the submission:

1. Type classification recommendation statement.
2. Memorandum documenting the decision and signed by MDA.
3. DA directed correspondence/documents detailed in Part I, section 1.5.4—Milestone III: Production or Fielding/Deployment Approval (Type Classification Procedures), of this pamphlet, if applicable.

(Use Letterhead Stationary)

MEMORANDUM THRU COMMANDER, U.S. ARMY FORCE MANAGEMENT SUPPORT AGENCY, RDD, ATTN: MOFI-FMR-DO,FORT LEAVENWORTH, KS 66027-1344

FOR COMMANDER, U.S. ARMY MATERIEL COMMAND, ATTN: AMCRDA-TE (MATERIEL STATUS OFFICE), 5001 EISENHOWER AVENUE, ALEXANDRIA, VA 22333-0001

SUBJECT: Materiel Status Record (MSR) Submission

1. The following record of decision to (type of decision/ action and generic nomenclature of item) is forwarded for recording in the MSR. Supporting documentation is enclosed.

a. General Information:

(1) Program Element and Category
(2) Project and Task Number
(3) Project and task Title
(4) Requirements document title and date
(5) Previously recorded MSR numbers
(6) LIN(s)
(7) NSN(s)

b. Section: (Enter only applicable section number and information as shown below. Either Section 1, or Section 2, or Section 3.)

Section 1—Type Classification or reclassification (includes information required by AR 70-1). For actions that do not require reviews, attach explanation and reference to regulatory authority):

(1) Item(s)
(2) Date of Review:
(3) TC decision (by item)
(4) ZLIN(s)
(5) SLIN(s)
(6) NSN(s)
(7) Other decisions (as applicable)
(8) Approved by: Date:

Section 2—Change in NSN/Nomenclature/LIN (Nomenclature changes are reported only for type classified items. State LIN(s) being affected):

(1) Item(s)
(2) Old NSN, Nomenclature or LIN
(3) New NSN, Nomenclature or LIN
(4) Reason for change
(5) Date of change

Section 3—Corrective Actions:

(1) Corrections/changes to previously submitted MSR (includes MSR number, item, title, nomenclature, NSN or LIN).
(2) Description of action and authority as applicable.
(3) Point of Contact (include name, office symbol and telephone number).

Enclosures (Signature Block)

1. Type classification recommendation statement.
2. Memorandum documenting the decision and signed by MDA.
3. DA directed correspondence/documents detailed in Part I, section 1.5.4—Milestone III: Production or Fielding/Deployment Approval (Type Classification Procedures), of this pamphlet, if applicable.

Figure XVI-1. Sample Format for Materiel Status Record Submission

Appendix XVII
DoD Parts Control Program

Points of contact:
HQ, U.S. Army Missile Command, Redstone Arsenal, ATTN: AMSMI-RD-SE-TD-ST, Huntsville, AL 35898-7466
Commander, Defense Supply Center, ATTN: DSCC-VS, 3990 East Broad Street, Columbus, OH 43216-5000

Reference:
MIL-HDBK-965, “Acquisition Practices for Parts Management.”

Refer to MIL-HDBK-965, “Acquisition Practices for Parts Management,” for information regarding the DoD Parts Control Program.

Appendix XVIII
Unsolicited Proposals

Points of contact:
Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), ATTN: SAAL-ZP, Skyline 6, Suite 309, 5109 Leesburg Pike, Falls Church, VA 22041-3201
U.S. Army Materiel Command, ATTN: AMCRDA-AI, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001
U.S. Army Contracting Support Agency, ATTN: SFRD-KP, 5109 Leesburg Pike, Suite 916, Falls Church, Virginia 22041-3201

References:
10 USC 2302-2315.
FAR 3.104, “Procurement Integrity.”
FAR 6.102, “Use of Competitive Procedures.”
FAR 6.3, “Other than Full and Open Competition.”
FAR 15.6, “Unsolicited Proposals.”
DOD 4205.1-M, “Selling to the Military,”
DoD 5500.7-R, “Joint Ethics Regulation.”
AR 27-60, “Intellectual Property.”

Introduction and Purpose

This section provides standard guidelines for Army activities to follow in tracking, reviewing and evaluating unsolicited proposals (UPs) as required by the Federal Acquisition Regulation (FAR). This guide is companion to FAR Subpart 15.6, Unsolicited Proposals, and should be used in conjunction with it.

It is the policy of the Army to foster and encourage the submission of UPs. The Army encourages prior contact by a prospective submitter with Army subject matter experts so long as such contact is for the limited objective of conveying to the submitter an understanding of the agency mission, responsibilities, and the needs relative to the type of effort contemplated, and the mechanism for submitting a UP. Information released to a contractor should be generally available to all contractors and potential contractors (subject to security considerations). Availability includes prior presentation at an Advance Planning Briefing for Industry, availability through a Technical and Industrial Liaison Office or through the Defense Technical Information Center (DTIC) or announcement in the Commerce Business Daily (CBD). Army personnel will conduct such contacts in a professional manner and make no commitments regarding the availability of funds and the future acceptance of UPs. Caution must be exercised to avoid the unauthorized release of acquisition information, consistent with DoD 5500.7-R, Joint Ethics Regulation and FAR 3.104, Procurement Integrity.

Prior to the Army's acceptance of any article of equipment, material, or disclosure of information for evaluation or testing, the individual, firm, or corporation submitting such article, invention, or disclosure must understand and agree to policy contained in FAR Subpart 15.6 and AR 27-60, section 3. UP submitters must understand and agree to this policy and execute a Memorandum of Understanding (MOU) provided by the UP Coordinator.

Procedures

1. General.

a. The Assistant Secretary of the Army (Acquisition, Logistics and Technology) (ASA(ALT)), SAAL-ZP, has Army staff responsibility for the Army UP Program.

b. The Commanding General, U.S. Army Materiel Command (AMC) has management responsibility for the Army UP Program. This responsibility may be delegated to the Deputy Chief of Staff for Acquisition (AMCRDA-AI). Management of the UP program includes:

(1) Appointment of an Army UP Manager.

(2) Appointment of a UP coordinator for processing UPs submitted directly to HQ AMC.

c. Heads of materiel developing agencies have the responsibility for issuing standing operating procedures to implement the guidance contained in this pamphlet. Each agency's UP program should be structured to meet their specific requirements.

d. The Commanding General, U.S. Army Training and Doctrine Command (TRADOC) should designate a point of contact who interfaces with AMC and other materiel developers to coordinate the evaluation of UPs within TRADOC.

e. Commanders of major Army commands not covered above should establish UP programs and appoint UP points of contact to serve as liaison between the Army UP manager and UP coordinators in subordinate commands and to provide guidance/information to the subordinate UP coordinators.

f. Installation/activity commanders are responsible for:

(1) Establishing procedures for coordinating the processing of UPs within their commands. This process includes the receipt, review, evaluation, and disposition of the UPs.

(2) Appointing UP coordinators at separate locations/installations under their command to ensure that UPs are processed expeditiously and in accordance with the guidelines contained in this pamphlet.

g. UP coordinators are responsible for coordinating the receipt, review, evaluation, and disposition of UPs and other unsolicited submissions and ensuring adherence to procedures outlined in Figure XVIII-1. To assist in monitoring the status of UPs, the UP coordinator should keep a detailed record of activities associated with the UP, (in other words, name, address, title and phone number of POC for the UP; information on the evaluator; and all dates of action on the UP).

2. Processing — Receipt.

a. Army personnel who receive unsolicited submissions will refer them to the local UP coordinator. The UP coordinator determines if the submission is a UP as defined in this pamphlet.

b. The UP coordinator sends an acknowledgment letter to the UP submitter not later than 10 working days after receipt. If the submission is not an UP, the UP coordinator simply returns it to the submitter with an explanation.

c. In the case of UPs that relate to the mission of another Army activity, the receiving UP coordinator, after informal telephonic coordination, transfers such UPs to the coordinator at the cognizant activity and informs the submitter.

d. When a UP coordinator returns a UP that does not relate to the mission of the Army, the coordinator, if possible, notes in the return letter where the submitter might resubmit the UP.

3. Processing — Review

The UP coordinator performs an initial review to determine if the submittal qualifies as a valid UP as defined in FAR Subpart 15.606-1. If the UP submittal qualifies, it should be sent to the appropriate activity within the organization for evaluation by technically qualified personnel who are authorized to determine if the organization can fund the UP (see Figure XVIII-2 for a detailed guide for the UP evaluator).

a. If the submittal does not qualify as a UP (FAR Subpart 15.606-1), the UP coordinator notifies the submitter in writing (see Figure XVIII-1 for a detailed guide for the UP coordinator).

b. Limited use of data (FAR Subpart 15.609(a)) as follows:

(1) Unless the information is available to the Army from another source without restrictions, Army personnel handling UPs will not use any data, idea, or any other part of a UP as the basis, or part of the basis, for a solicitation or in negotiations with another firm unless the UP submitter agrees to the idea in writing. Army personnel will take extreme care when meeting with a particular firm to say nothing that might allow that firm to infer anything that a competitor may have submitted as part of a UP.

(2) A UP may include data that the submitter does not want disclosed for any purpose other than evaluation. Army personnel will not disclose outside the Government, information in any UP that is marked proprietary. All data rights issues should be coordinated with the Patent Counsel. If the submitter wishes to restrict the proposal, the title page must be marked with the legend contained in FAR 15.609(a).

(3) The UP coordinator immediately returns a UP that is marked with a legend different from that provided in FAR 15.609(a) along with a letter which provides appropriate information as highlighted in Figure XVIII-3. The return letter states that the proposal cannot be considered because it is impractical for the Government to comply with the legend (and point out why this is so), but that the proposal will be considered if it is resubmitted with a satisfactory legend.

(4) The UP coordinator should attach a locally reproduced cover sheet with the legend contained in FAR 15.609(d) for those UPs being tasked to in-house evaluators, UPs being forwarded elsewhere in the Government, and UPs without restrictive legends that are from educational or non-profit organizations (also see FAR 15.609(f)) when the UP is being evaluated by organizations outside the Government. UPs from

other organizations may be evaluated outside the Government only if the UP coordinator obtains a written agreement that the data in the proposal may be released to others outside the Government for the purpose of evaluation. The UP coordinator also obtains a written agreement from any non-Government evaluator stating that data in the proposal will not be disclosed to others outside the Government.

4. Processing — Evaluation (FAR Subpart 15.606-2).

a. The UP coordinator coordinates the evaluations.

b. Army personnel with responsibility for the Army task most closely related to the UP perform the evaluation. Wherever possible, there will be at least two independent technical evaluations of each UP.

c. The evaluator should develop an evaluation form using the criteria in FAR Subpart 15.606-2. Also include in the evaluation form any action being taken regarding funding, and/or rejection of the UP. If the proposal is not funded, the evaluator should be requested to attach a draft reply or rejection letter. In addition, the evaluation form should include the name, title, phone number, and signature of evaluator and the approver.

d. UP evaluators are responsible for obtaining supporting evaluations of UPs from other Department of Defense (DoD) activities when necessary and apprise the UP coordinators of such actions. They may also communicate with the submitters in order to obtain clarifications of proposal contents and to inform the submitter of modifications that can make proposals fit Army needs. In conducting such discussions, evaluators should take care to avoid giving submitters un-releasable information that would provide an unfair advantage over potential or actual competitors. (See Figure XVIII-2)

5. Processing — Disposition.

a. The UP coordinator ensures that the evaluation is completed and the result submitted in writing to the submitter not later than 90 days after receipt of the proposal and executed MOU. If the 90-day suspense cannot be satisfied, the UP coordinator sends an interim reply to the submitter detailing the reason(s) for the delay and providing an estimated completion date.

b. The UP coordinator ensures that the Unsolicited Proposal Evaluation Review Committee (UPERC) reviews all UPs. The UPERC ensures that appropriate attention is given to adequately evaluating and processing unsolicited proposals.

c. After review and/or evaluation, the UP coordinator informs the submitter by letter of the results of the evaluation. The UP coordinator may select from among the following categories of responses.

(1) Acknowledge receipt of the UP, request an executed MOU when necessary and a second copy of the UP when appropriate. It is appropriate to request a second copy when the original cannot be conveniently copied.

(2) Not meeting the FAR criteria for an UP. Provide letter that contains guidance to preparers of unsolicited proposals as provided in Figure XVIII-3. If the proposal is being rejected because sole-source basis does not exist, indicate that if a Request for Proposal (RFP) is issued, the submitter may respond with a competitive proposal.

(3) Not related to local mission, forwarding UP elsewhere in the Army.

(4) Not related to Army mission. (Suggest non-Army activities, if known.)

(5) Second request for executed MOU.

(6) Rejected for technical reason (including duplication of existing research); include the reasons. Do not list the name of the evaluator of the UP.

(7) Rejected because of funding limitations and program priorities. (Use for relevant, technically acceptable proposal only.)

(8) Interim reply; holding for further evaluation. (Include target date.)

(9) Interim reply; intend to fund. Indicate that the submitter should take no action until contacted by contracting officer and contract awarded. Also indicate that final determination is subject to the provisions of the Competition in Contracting Act (CICA).

(10) Interim reply; holding for funding. (Repeat every 6 months until funded or rejected. Consider rejection after 18 months if not funded.) The UP coordinator should inform the submitter that the Army's intent to fund does not guarantee the proposal's ultimate funding. Non-award can result from lack of funds or (in the case of a non-research UP) a subsequent competitive solicitation.

d. Sole-source justification as follows:

(1) CICA and the FAR differentiate between UPs in general, and unsolicited research proposals in particular. Specifically, FAR 6.302-1 states that— "Supplies or services may be considered to be available from only one source if the source has submitted an unsolicited research proposal that (A) Demonstrates a unique and innovative concept, or, demonstrates a unique capability of the source to provide the particular research services proposed; (B) Offers a concept or services not otherwise available to the Government; and, (C) Does not resemble the substance of a pending competitive acquisition."

(2) Subjects that do not fall into the sub-category of unsolicited research proposals include studies, analyses, or consulting services. Guidance for other than full and open competition may be found in DFARS 206.302-1.

(3) Unique and innovative concept may be demonstrated by performing a search of the Tech-Report and the Work-Unit Information Summary databases at the DTIC and documenting the search in the sole-source justification. Guidance should be obtained from the local Competition Advocate, who has approval authority for sole-source awards.

(4) Many unsolicited research proposals do not require CBD synopsis, before award, based upon exception (8), FAR 5.202: "The contract action results from the acceptance of an unsolicited research proposal that demonstrates a unique and innovative concept ... and publication of any notice ... would improperly disclose the originality of thought or innovativeness of the proposed research, or would disclose proprietary information associated with the proposal."

e. UPs should not be rejected solely because of non-availability of funds without considering reprogramming.

f. Rejected UPs may be returned to the submitter if requested; however, the UP coordinator retains one copy of each UP to avoid any future misunderstanding as to what was submitted.

g. Case files are not closed until the contract is signed or the UP is rejected; that is, until the rejection letter or front page from the signed contract can be enclosed.

h. The UP coordinator provides for the review of recommendations to accept or reject UPs. Whenever possible, the review is conducted by at least two technically competent personnel not involved in the original evaluation (a UPERC). The UPERC can meet formally or the evaluation packages can be circulated among the members for review and comment.

i. In all cases, the UPERC is responsible for confirming that the evaluation was accomplished in a thorough and professional manner and that subject-matter expert(s) performed the evaluation(s).

j. If the UP has not been recommended for funding, the UPERC confirms that—

(1) Reprogramming of funds was considered if the UP was judged relevant and technically acceptable.

(2) The response letter(s) accurately describe the reason(s) for rejection and make no unfounded promises.

k. If the UP has been recommended for funding, the UPERC confirms that the UP evaluator has shown that there is adequate justification for recommending a sole-source contract. In the case of an unsolicited research proposal, such confirmation requires a search of the DTIC database.

1. Upon receipt of an unsolicited submission, first determine if it constitutes a valid unsolicited proposal (UP) according to the Federal Acquisition Regulation (FAR) (as opposed to advertising material, technical correspondence, or a commercial product offer). If the submission does not constitute a UP, return it to the sender; otherwise, determine if the UP relates to your activity's mission. If it does not, forward it to the appropriate Army activity (after phoning to confirm) or return it to the sender, whichever is appropriate. If the UP relates to the local mission, but there is a current or pending procurement, or the proposal is for something that must be procured competitively and there is no potential for being able to justify a sole-source procurement, then return the UP to the sender.
2. When you return a submission that represents a feasible approach to an existing Army requirement, consider enclosing a copy of your recent Broad Agency Announcement (BAA), and suggest that the submitter might consider resubmitting the proposal under the BAA. If the UP does not seem to represent a current procurement, this represents a determination that the submission constitutes a valid UP to be evaluated by your activity.
3. When sending the UP and evaluation guidance to the evaluator, set an initial 30-day suspense and monitor the evaluation. If it appears that the evaluation will extend beyond 90 days, apprise the submitter of the delay and the reasons. Alternatively, if the evaluator is keeping in contact with the submitter, you only need to place memoranda for record in the case file. If the evaluator states an intent to fund, inform the submitter of the Army's preliminary intent to fund. A completed evaluation form is not required; however, you must keep the case open and maintain contact with the evaluator (at about 60-day intervals) until the contract is awarded and you receive the front page from the contract. The purpose of this is to eliminate the possibility of submitters not being informed if the UP is subsequently not funded.
4. If the UP is not funded, provide copies of the evaluation, relevant portions of the UP, and the draft rejection letter (prepared by the evaluator) to two knowledgeable, experienced members of your activity not involved with the original evaluation. This may be accomplished by convening a meeting of the Unsolicited Proposal Evaluation Review Committee (UPERC) (which is preferred) or by providing copies of the package to the UPERC individually in order to obtain their concurrence/ questions. Obtain additional information, if necessary, final UPERC concurrence, and mail the submitter the final rejection letter.
5. If the UP has been recommended for funding by the evaluator(s), provide copies of the UP and the evaluation(s) to the UPERC for a final review prior to awarding a contract.

Figure XVIII-1. Detailed Guide for the Unsolicited Proposal Coordinator

1. As a potential Unsolicited Proposal (UP) Evaluator, the UP process for you should begin with your meeting with a company interested in submitting a UP. This is encouraged by the Federal Acquisition Regulation (FAR) and by Army policy. When meeting with a company, review its capabilities and describe the Army problems and deficiencies that might be targets of opportunity. Take care to avoid discussing procurement information or information that is not generally available to all potential contractors. “Available” can mean prior presentation at an Advance Planning Briefing for Industry, or accessible through the Defense Technical Information Center (DTIC), or at a Technical and Industrial Liaison Office. Be sure to give the company the name of your UP coordinator and explain that the UP should go to the coordinator and not to you. If your activity has an open Broad Agency Announcement (BAA) that relates to the potential UP, provide the visitor a copy and explain that the proposal should be submitted in response to the BAA rather than as a UP. The proposal is competitive if related to a BAA and a sole-source justification is not required.
2. When the company submits a UP directly to you, forward it to your activity's UP coordinator. The UP coordinator will then log it in and acknowledge the proposal, confirm that the proposal constitutes a valid UP as defined in FAR 15.601 and 15.603, and return it to you (if appropriate) along with an evaluation package, instructions, and an evaluation form. You will also receive UPs from the coordinator when such UPs are submitted directly to the UP coordinator.
3. Your first responsibility in evaluating a UP is to confirm that there is not a pending solicitation for the product or service offered or if it is not available from another source. Note that Army policy requires that we provide the submitter a final or interim reply within 90 days. Accordingly, you will have 30 days to complete the evaluation. If it appears that there will be delays, inform the coordinator who will apprise the submitter of the delay. In addition, if you are communicating with the submitter (which is legal) tell the coordinator; often this can satisfy the requirement to keep the submitter informed but must be documented in the files.
4. If you do not intend to fund the UP, complete an evaluation form and prepare a draft letter of rejection. If, on the other hand, you intend to fund the UP, inform the coordinator, who will apprise the submitter of the Army's preliminary intent to fund? Later, when the contract is awarded, send the coordinator a copy of the front page of the contract.
5. In order to be able to award a contract based upon a UP, a sole-source justification must be prepared. In the case of an unsolicited research proposal, you must demonstrate that the effort is unique and innovative. This may most easily be accomplished by performing a search of the Tech-Report and Work-Unit Information Summary databases at DTIC and documenting the results of the search to the satisfaction of the contracting officer. For other than unsolicited research proposals, you must demonstrate the unique capabilities of the offeror.
6. After deciding to fund a UP, and informing the coordinator who then informs the submitter, it can happen that a contract is not awarded. Reasons might include lack of funds, changes in requirements or priorities, or lack of success in justifying a sole-source award. If the UP cannot be funded, immediately inform the coordinator, complete an evaluation form, and prepare the rejection letter. Additional information on sole-source awards may be obtained from the local Competition Advocate.

Figure XVIII-2. Detailed Guide for the Unsolicited Proposal Evaluator

The following information in this figure can be extracted and provided, in letter form, by designated unsolicited proposal (UP) coordinators, to organizations or individuals that request guidance regarding the preparation and submission of unsolicited proposals.

Body of Letter

1. The information provided in this letter is to aid those organizations or individuals that may not have access to the Federal Acquisition Regulation (FAR) in the preparation and submission of unsolicited proposals to the United States Army. This letter provides guidance that conforms to the FAR, Subpart 15.6, Unsolicited Proposals.
2. If you have a competitively available product that you want the Army to consider for purchase, do not submit it as an unsolicited proposal. First, obtain a copy of the handbook "Selling to the Military" (DoD 4205-1-M) from the U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328. The handbook is an introduction to the broad subject of contracting with agencies of the U.S. Department of Defense. It is intended to be useful to those who manage the marketing efforts of small businesses, especially firms that have not previously had Government contracts. The handbook contains general information about contracting. It provides lists of products and services, keyed to particular major buying offices, and it also provides a geographically arranged list of all DoD buying offices. Second, after review of the handbook, you will find that you will need to contact the Small Business Offices supporting the activities that purchase the item you have to sell. The Small Business Offices will help you fill out the paperwork to get you on the Solicitation Mailing List for the item you have to sell. The Purchasing Activities will then inform you when solicitations are released for your item.
3. You must understand the following definitions to judge whether you have a valid unsolicited proposal.
   a. Unsolicited Proposal: A written proposal for a new or innovative idea that is submitted to an agency on the initiative of the offeror for the purpose of obtaining a contract with the Government, and that is not in response to a request for proposals, Broad Agency Announcement, Small Business Innovation Research topic, Small Business Technology Transfer Research topic, Program Research and Development Announcement, or any other Government-initiated solicitation or program.
   b. Advertising Material: Material designed to acquaint the Government with a prospective contractor's present products, services, or potential capabilities, or designed to stimulate the Government's interest in buying such products or services.
   c. Commercial Item Offer: An offer of a commercial item that the vendor wishes to see introduced in the Government's supply system as an alternate or replacement for an existing supply item. This term does not include innovative or unique configurations or uses of commercial items that are being offered for further development and that may be submitted as an unsolicited proposal.
   d. Contribution: A concept, suggestion, or idea presented to the Government for its use with no indication that the source intends to devote any further effort to it on the Government's behalf.
   e. Technical Correspondence: Written request for information regarding Government interest in research areas, submission of research descriptions, pre-proposal explorations, and other written technical inquiries.
4. (Name of UP Coordinator), as the unsolicited proposal coordinator for (Name of Organization) will guide you through the unsolicited proposal submission process or refer you to the appropriate organization for evaluation of your proposal. We encourage potential offerors to make preliminary contacts, through the UP coordinator, with appropriate field personnel before preparing a detailed unsolicited proposal or submitting proprietary data. Such contacts can answer questions as to the general need for the type of effort contemplated. Neither you nor the Army should consider such contacts as negotiations in contemplation of any contractual end work for the Army. Because the Army is composed of organizations with varied functional areas of responsibility, preliminary contact will allow ultimate referral to the appropriate organization, saving considerable time and effort.
5. There is no particular format to be followed in preparation of unsolicited proposals. The proposal should contain the following information to permit consideration in an objective and timely manner:
   a. Basic information. Offerors name, address, and type of organization; e.g., profit, nonprofit, educational, small business, minority business, women-owned business.

Figure XVIII-3. Guidance to Preparers of Unsolicited Proposals

b. Names and telephone numbers of technical and business personnel to be contacted for evaluation or negotiation purposes.
c. Names of other Federal, State, or local agencies or other parties, if any, receiving the proposal or funding the proposed effort.
d. Date of submission and signature of a person authorized to represent and contractually obligate the offeror.
e. Technical Information. A concise, descriptive title and an abstract (200-300 words) stating the basic purpose, summary or work, and expected end result of the proposed effort.
f. A reasonably complete narrative in which the relevance of the proposed work to the Army's mission is discussed. State the problems to be addressed, the specific objectives of the research, and the expected consequences of successful completion of the research including potential economic and other benefits.
g. A full and complete description of the work to be performed, the method of approach, and the extent of effort to be employed. Provide an estimated period of time in which to accomplish the objectives and criteria by which success of the project can be evaluated.
h. Names and biographical information on the key personnel who would be involved, including alternates, in the project.
i. Any support needed from the Army; e.g. facilities, equipment, material.
j. Supporting Information. A breakdown of the proposed cost or price in sufficient detail for meaningful evaluation. Show the estimated cost of materials and how you established it. Show the estimated costs of labor by category (engineering, manufacturing, test, etc.) and show the salary rates for each category. Show the indirect expense rates (manufacturing and engineering overheads, general and administrative expenses) to be applied. Explain the basis for the labor and indirect expense rates included in your cost breakdown (e.g., current experienced rates, projected from current experience, budgetary, etc.). Identify and explain the basis for any other cost elements included in your proposal.
k. A statement as to the proposed duration of the effort, the type of contract preferred, and the length of time for which the proposal is valid.
l. A brief description of any previous or ongoing research and development (R&D) work performed in the field or in related fields. Describe briefly the facilities and any special equipment available to perform the proposed effort.
m. Names and telephone number of agency technical or other agency points of contact already contacted regarding the proposal.

6. Unsolicited proposals may include proprietary data which you do not want disclosed to the public or used by the Government for any purpose other than proposal evaluation. DoD cannot assume responsibility for use of such data unless it is specifically and clearly marked with the following legend on the title page:

"Use and Disclosure of Data (FAR Subpart 15.609(a))

This proposal includes data that shall not be disclosed outside the Government and shall not be duplicated, used, or disclosed — in whole or in part — for any purpose other than to evaluate the proposal. However, if a contract is awarded to this offeror as a result of — or in connection with — the submission of these data, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government's right to use information contained in the data if it is obtained from another source without restriction. The data subject to this restriction are contained in Sheets [insert numbers or other identification of sheets]."

a. You must also mark each restricted sheet with the following legend:
"Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this proposal."
b. We will return any unsolicited proposal received with a legend other than that stated above.

7. You will submit your prepared proposal to the unsolicited proposal coordinator for the Army organization determined to be responsible for the item or service you have to offer. Do not submit your proposal to any Government technical personnel with whom you have preliminary discussions, unless that person is a designated coordinator.

Figure XVIII-3. Guidance to Preparers of Unsolicited Proposals (continued)

8. Your unsolicited proposal will be acknowledged within 10 days of receipt by the unsolicited proposal coordinator. The coordinator will provide you with an interim or final answer on your proposal within 90 days.

9. After the content of the proposal is approved, the coordinator will have appropriate personnel engaged in the technical areas of effort similar to the unsolicited proposal conduct an evaluation. If the evaluator requests further information, submission will be at your expense and risk and shall create no obligation on the Government. The following are some factors considered by Army technical personnel in evaluating unsolicited proposals (FAR Subpart 15.606-2):
   (a) Unique, innovative and meritorious methods, approaches, or concepts demonstrated by the proposal.
   (b) Overall scientific, technical, or socio-economic merits of the proposal.
   (c) Potential contribution of the effort to the agency's specific mission.
   (d) Your capabilities, related experience, facilities, techniques, or unique combinations of these that are integral factors for achieving the proposed objectives.
   (e) The qualifications, capabilities, and experience of your proposed principal investigator, team leader, or key personnel who are critical in achieving the proposed objectives.
   (f) Realism of the proposed cost and availability of funds.

10. You must be aware that a favorable comprehensive evaluation of an unsolicited proposal does not, in itself, justify awarding a contract without providing for full and open competition. For example, we must reject your unsolicited proposal if it (FAR Subpart 15.607)—
   a. Is available to the Government without restriction from another source.
   b. Closely resembles a pending competitive acquisition requirement.
   c. Does not relate to the activity's mission.
   d. Does not demonstrate an innovative and unique method.

11. If we reject your proposal, you of course, will be informed as to the reason for rejection. We retain a copy of all rejected unsolicited proposals to avoid any future misunderstanding regarding what was submitted.

12. We may only consider funding unsolicited proposals that offer significant advancement in the state-of-the-art or innovation. Unsolicited proposals that are recommended by our technical offices may never be funded due to higher priority requirements.

13. Please note those only duly constituted contracting officers have authority to contractually bind the Government. All other personnel who receive, handle, or evaluate unsolicited proposals are not authorized to commit the Government.

Figure XVIII-3. Guidance to Preparers of Unsolicited Proposals (continued)

Appendix XIX
Transportability

Point of Contact: Director, Military Traffic Management Command, Transportability Engineering Agency (MTMCTEA), ATTN: MTTE-DPE, 720 Thimble Shoals Blvd., Suite 130, Newport News, VA 23606-2574. Email: dpemail@baileys-emh5.army.mil. Web Site: www.tea-army.org/.

References:
DOD Directive 4510.11, "DoD Transportation Engineering."
AR 71-9, "Materiel Requirements."
AR 73-1, "Test and Evaluation Policy."
MIL-STD-209, "Interface Standard for Lifting and Tiedown Provisions."
MIL-HDBK-669, "Handbook for Loading Environmental and Related Requirements for Platform Rigged Airdrop Materiel."
MIL-STD-814C, "Requirement for Tiedown, Suspension Extraction Provisions on Military Materiel for Airdrop."
MIL-STD-910, "Mobile Tactical Systems Overload Prevention Procedures."
MIL-STD-913, "Requirements for the Certification of Externally Transported Military Equipment by DOD Rotary Wing Aircraft."
MIL-STD-1366, "Interface Standard for Transportability Criteria."
MIL-STD-1791, "Designing for Internal Aerial Delivery in Fixed Wing Aircraft."
MIL-M-63005C, "Preparation for Shipment of Army Aircraft."
DI-PACK-80880A, "Transportability Report."

Introduction and Purpose

This appendix provides guidance to implement the Army Engineering for Transportability program. It provides the Combat Developer (CBTDEV) and Materiel Developer (MATDEV) procedures for use during the materiel acquisition process. These procedures help ensure that systems, equipment, and munitions (SEM), are designed, engineered, and constructed so that required quantities can be moved efficiently and economically by existing and planned transportation assets and infrastructure of the Defense Transportation System.

The concept of developing efficiently and economically transportable equipment and combat resources should be an integral part of the acquisition process. Transportability is a critical element of strategic and tactical deployment. When strategic and tactical deployment are requirements, transportability should be a primary system selection and design factor; however, tradeoffs between transportability and combat effectiveness may be appropriate.

The Engineering for Transportability Program applies specifically to SEM meeting the definition of a transportability problem item. A transportability problem item is an item that meets any of the following conditions:

1. The item is wheeled or tracked
2. The item overloads a designated transport medium.
3. The item requires special handling or specialized loading procedures.
4. The item has inadequate ramp clearance for ramp inclines of 15(.
5. Exceeds any of the following conditions:
   a. Length—20 feet (6.100 m), based on the size of a standard 20-foot ISO container.
   b. Width—8 feet (2.438 m) , based on the size of a standard 20-foot ISO container.
   c. Height—8 feet (2.438 m) , based on the size of a standard 20-foot ISO container.
   d. Weight—10,000 pounds (4535 kg), based on the payload of the 5-ton truck.
   e. Weight per linear foot—1,600 pounds (726 kg), based on air transport limits given by MIL-STD-1791.
   f. Floor contact pressure—50 psi (344.75 kpa), based on air transport limits given by MIL-STD-1791.
   g. Maximum axle load (pneumatic tires)—5,000 pounds (2268 kg), based on air transport limits given by MIL-HDBK-1791.

h. Maximum wheel load (pneumatic tires)—2,500 pounds (1134 kg), based on air transport limits given by MIL-STD-1791.

i. Tire pressure—90 psi (620.55 kpa), based on air transport limits given by MIL-STD-1791.

Transportability engineering assistance may also be available for SEM not meeting the problem item definition.

General

The CBTDEV, Training Developer (TNGDEV), and MATDEV should refer all transportability matters to the Military Traffic Management Command Transportation Engineering Agency (MTMCTEA), the Army transportability point-of-contact. MTMCTEA is the engineering and analysis proponent ensuring worldwide deployability and force projection of Amy equipment. MTMC is the single DoD manager for military traffic, surface transportation, and common ocean terminals.

The CBTDEV, MATDEV, testers, technical and operational evaluators, and logisticians should maintain a liaison with MTMCTEA and each other to assure consideration and accomplishment of transportability requirements.

Correspondence concerning transportability policy, regulations, transportability reports, requests for transportability approvals, highway and rail transportation assistance, and technical and operational matters pertaining to the day-to-day operations of the engineering for transportability program should be forwarded to: Director, MTMCTEA, ATTN: MTTE-DPE, 720 Thimble Shoals Blvd., Suite 130, Newport News, VA 23606-2574. Address e-mail to: dpemail@baileys-emh5.army.mil. This includes requests for approval of rail loading drawings for addition to the Association of American Railroads (AAR) “Rules Governing the Loading of Commodities on Open Top Cars”. Additional information on these topics and transportation guidance can be obtained from the Transportability Engineering web site http://www.tea-army.org.

Procedures

The CBTDEVs, TNGDEVs, and MATDEVs should obtain transportability engineering and design assistance from MTMCTEA for materiel to be transported in Air Force aircraft. MTMCTEA obtains air certification from the U.S. Air Force Aeronautical Systems Center (ASC/ENECA) and can provide virtual analysis and test loadings upon request to help ensure items are capable of transport by all required fixed-wing aircraft.

For systems utilizing shelters, CBTDEVs and MATDEVs should obtain engineering and design assistance and certification for use from the Army Shelter Management Office, U.S. Army Natick Research Development and Engineering Center, ATTN: SSCNC-UB, Natick, MA 01760-5017.

In addition, CBTDEVs, TNGDEVs, and MATDEVs should obtain engineering and design assistance from the Commander, NRDEC, ATTN: SSCNC-UAS, Natick MA 01760-5000, for certification of materiel to be:

1. Airdropped from fixed wing aircraft (MIL-STD-814 and MIL-HDBK-669); or
2. Internally or externally transported by rotary winged aircraft (MIL-STD-913).

NRDEC coordinates and provides airdrop and helicopter certifications to MTMCTEA.

MATDEVs provide SEM with a transportation and shipping data plate or decal showing tie down and lifting point locations and the location of the center of gravity (MIL-STD-209).

The following MIL-STDs and Handbooks should be used for transportability criteria:

1. Interface Standard MIL-STD-209 for lifting and tie down criteria.
2. MIL-HDBK-669 and MIL-STD-814 for airdrop criteria.
3. MIL-STD-913 for helicopter external air transport criteria.
4. Interface Standard MIL-STD-1366 for general transportability criteria.
5. MIL-STD-1791 for fixed wing air transport criteria.

Materiel Requirements Documents

Tactical and strategic mobility requirements should be established early in the acquisition cycle and monitored throughout. The CBTDEV, in coordination with the MATDEV and MTMCTEA, should include a clear and definite statement of the required modes of transport in the Operational Requirements Document (ORD). See MIL-STD-1366 for modal information and MTMCTEA Pam 70-1 for guidance with establishing transportability requirements.

The following is broad guidance presented to assist in development of transportability requirement statements in the specification or purchase description.

1. Highway. State level of restriction allowed for highway movement. If the item is to be transported or towed, state the types and models of the planned transport vehicles.

2. Rail. State requirement for rail transport in the Continental United States (CONUS) and overseas, including rail clearance diagrams that must be met, and consult MIL-STD-810 for details to ensure structural demands of rail transport are considered and met by successfully completing the rail impact test.

3. Marine. State the smallest landing craft required in Logistics-Over-the-Shore (LOTS) operations, and if landing craft are not required, state the specific marine transport requirements (RORO, LOLO, Container ship, Breakbulk, etc).

4. Fixed Wing Aircraft. State the types required (C-130, C-141, C-17, or C-5) and whether airdrop is required. If sectionalization is permitted, state the permissible number of people and the assembly and disassembly clock hours. State any mission range minimum that could affect system weight.

5. Helicopters. Specify the types of helicopters required (CH-46, CH-47, CH-53, UH-1, UH-60, V-22), type of transport (internal and/or external), and the mission scenario/range.

6. Intermodal freight containers/flatracks. List the sizes and the International Organization for Standardization (ISO) designation of containers in which transport is required. List the size (35 or 40 ft) of flatrack in which transport is required. Normally, non-vehicular SEMs and small vehicles are containerized, and small and medium vehicles transported on flatracks.

7. Lifting and Tie down provisions. SEM requiring deployment should be equipped with lifting and tie down provisions IAW MIL-STD-209. MIL-STD-209 is an Interface Standard that may be call out directly in solicitation packages.

Studies prior to the initiation of item procurement should consider the transportability features of the proposed item. Transportation constraints that guide concept design can be established to support detailed consideration of transportability as a critical element. This early involvement further supports decisions to pursue system acquisition since system risks are better quantified.

Transportability Reports

Transportability should be considered as a part of the analysis of alternatives during Concept Exploration. Submission of a transportability report, including 3D computer aided design (CAD) models and/or detail drawings of the general configuration of alternatives allows MTMCTEA to evaluate transportability to support the program initiation decision. (See MTMCTEA Pam 70-1, Section IV.)

The MATDEV should submit transportability data in the transportability report (DI-PACK-80880A or MTMCTEA Pam 70-1, Section VI) format. The report includes system dimensional characteristics as 3D CAD models or detail drawings to support modeling and simulation of the item in the transportation environment. The MATDEV should submit transportability reports on all transportability problem items and systems with stated transportability requirements to Director, MTMCTEA, ATTN: MTTE-DPE.

While items of equipment are handled differently according to the type of acquisition, early involvement of MTMCTEA is essential to ensure system design incorporates features that support transport. Transportation design constraints can be readily identified that can drive the dimensional and weight limitations for the system. Early identification of these constraints can prevent costly system changes later in the acquisition process.

The following identifies the general procedures and timing for submission of transportability reports for the different types of acquisition.

Developmental Items

An initial transportability report with drawings and/or CAD models should be submitted by the MATDEV as soon as the item's general configuration is established during the Program Definition and Risk Reduction phase. In all cases the initial transportability report should be submitted not later than 90 days before the Milestone (MS) I decision review. MTMCTEA will then perform an initial transportability engineering analysis of the proposed item and provide analysis results to the MATDEV.

An updated transportability report and request for transportability approval should be submitted by the MATDEV not later than 90 days prior to the MS II decision. If the item or system meets transportability requirements, MTMCTEA will grant transportability approval.

An updated transportability report and request for transportability approval should be submitted by the MATDEV not later then 90 days prior to the MS III decision review. If the item or system meets the transportability requirements established by the requirements document, MTMCTEA affirms transportability approval.

Commercial and Non-Developmental Items

An initial transportability report with drawings and/or 3D CAD model should be submitted by the MATDEV as soon as the item's general configuration is established during the Program Definition and Risk Reduction phase. In all cases, the initial transportability report should be submitted at least 90 days prior to the Milestone I decision review. MTMCTEA performs an initial transportability engineering analysis of the proposed item and provide analysis results to the MATDEV.

The purchase description (or specification) should be submitted by the MATDEV at least 30 days prior to the Milestone III decision review. MTMCTEA reviews the purchase description (or specification) to ensure that it adequately reflects system transportability requirements.

A transportability report for all competing systems should be submitted by the MATDEV at least 30 days prior to awarding a production contract. MTMCTEA grants transportability approval to all systems that meet the transportability requirements of the purchase description (or specification). MTMCTEA participation in the Source Selection Evaluation Board satisfies this requirement.

A final transportability report should be submitted by the MATDEV after production qualification (or first article) testing, but before materiel release. If the system meets the transportability requirements of the purchase description (or specification), MTMCTEA affirms transportability approval.

Reprocurements

The purchase description (or specification, technical data package) should be reviewed by MTMCTEA at least 30 days before the data call. The review determines if the document contains current transportability standards. Based on the review, MTMCTEA grants transportability approval to any item that meets the transportability requirements of the purchase description (or specification, technical data package).

A transportability report should be submitted by the MATDEV after production qualification (or first article) testing, but before materiel release. If the system meets the transportability requirements of the purchase description (or specification, technical data package), MTMCTEA grants transportability approval.

MATDEVs or field units should submit a transportability report and request for transportability approval whenever there is an increase in an item's or system's shipping dimensions and/or weight due to modifications.

Transportability reports, MTMCTEAs transportability engineering analyses, and transportability approvals should be included in the Integrated Logistic Support (ILS) portion of the program management documentation.

Force Deployment Analyses

Proposed ACAT I SEMs should have a deployability assessment conducted by MTMCTEA for consideration during the Concept Exploration phase. This assessment analyzes the effect that the new system and its support structure have on the deployability of the gaining unit. MTMCTEA and the CBTDEVs determine the scope of the deployment analysis on a system-by-system basis. This effort coincides with the deployability analysis required for the system Analysis of Alternatives.

The force deployment analysis is furnished to Headquarters, Training and Doctrine Command (HQ TRADOC) and the TRADOC Analysis Center before the MS I decision review.

Airdrop and Helicopter Air Transport

Design assistance available from Natick includes the following:

1. Analysis of proposed designs to determine helicopter air transport and airdrop acceptability. This assistance is obtained as early as possible in the design stages of development.

2. Engineer designed trial rigging procedures for helicopter air transport and airdrop of the final design of developmental materiel.

3. Laboratory facilities for developmental testing proposed materiel in controlled helicopter air transport and airdrop environment including lifting provision and tie down provision restraint test facilities. In addition, static drop, roller testing, and extraction, suspension, and tie down provision testing would be included for materiel to be delivered by airdrop.

4. Recommendations for component and systems designs and energy dissipation configurations to provide optimum airdrop capability.

Consider auxiliary equipment such as platform, parachute, webbing strap, and energy dissipation material (MIL-HDBK-669) when equipment is developed for airdrop. The unit (rigged) load will meet the limitations

specified in MIL-HDBK-1791. Tie down, suspension, and extraction provisions will meet the requirements of MIL-STD-814. Equipment designed for airdrop also must be designed to be air transportable.

SEMs to be transported internally or externally by helicopters (CH-46, CH-47, CH-53, UH-1, UH-60, V-22) that are transportability problem items require MTMCTEA transportability approval. MATDEVs should submit test data and structural analyses to MTMCTEA and Natick that prove lifting and tiedown provisions meet MIL-STD-209. Test loads and flight tests may be required for transportability approval.

Modeling and Simulation

Modeling and simulation is used to support transportability analyses of SEMs prior to or in place of transportability testing. MATDEVs to MTMCTEA should submit CAD models or detail drawings for both physical and structural evaluation. Types of analyses include item clearance with transportation constraints, lifting and tiedown provision location and strength, and transport shock and vibration. Results of these evaluations will be used in determining the testing requirements for the item.

Transportability Testing

The requirement for transportability testing should be established early in item acquisition, and included in the program test plan. It is possible that test requirements may change during the acquisition process as the item configuration matures. CAD analyses may be determined suitable to replace some testing. This is determined on an item-by-item basis. The MATDEV is responsible for scheduling testing so it is completed to support transportability approval.

MATDEVs and CBTDEVs should not establish new test facilities to conduct airdrop tests on materiel. Such test facilities are established and maintained by the test and Evaluation Command (TECOM). This does not prevent the use of development agencies' static drop facilities that are already in existence and maintained for other developmental purposes or the use of commercial test sites.

The requirement for an air transportability test loading is established during ASC/ENECA review of an item for air transport certification. A test loading can be required when an item infringes on the safety clearances normally maintained between an item and the aircraft structure, or when special procedures may be required to accomplish loading. When an air transportability test loading is required, the MATDEV should coordinate with ASC/ENECA to establish test requirements and begin the process of aircraft scheduling.

Helicopter certification is required for all items with a helicopter transport requirement. The MATDEV should coordinate with NRDEC to begin the process of analysis and flight tests required for certification.

Transportability testing should be successfully completed prior to MTMCTEA granting transportability approval. All research, development, test and evaluation (RDT&E) items, non-developmental items, and materiel changes should be tested. Identical items manufactured by different contractors, or identical items manufactured by the same contractor under different contracts (different production runs), should be tested individually.

See AR 73-1 for detailed test and evaluation guidance.

Transportability Guidance Documentation

MTMCTEA establishes restraint and lifting procedures for required transport modes for inclusion with the item transportability approval. The MATDEV should include these procedures in the integrated logistic support (ILS) portion of the program management documentation.

Transportability Guidance Pamphlets/References. MTMCTEA publishes transportability guidance pamphlets for use within the transportation community. Pamphlets for highway and rail tie down, marine lifting and tie down, lifting and tie down of helicopters, and containerization are maintained, with updates available quarterly on the web site http://www.tea-army.org/, and published every 2 to 3 years to incorporate new acquisitions and modifications to existing systems. MTMCTEA also maintains these documents, including interim updates, on the Internet. These are available at http://www.tea-army.org/.

Transportability Characteristics Data

MATDEVs should submit transportability characteristic data to Director, MTMCTEA, ATTN: MTTE-SI, within 30 days of an item being assigned to a table of organization and equipment (TOE) or being assigned a standard line item number. For items where MTMCTEA has conducted a transportability engineering analysis and granted transportability approval, the developer should either certify that the data submitted during Engineering and Manufacturing are valid for the production model or submit corrected data.

Appendix XX
Horizontal Technology Integration (HTI)

Point of Contact: Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 103 Army Pentagon, ATTN: SAAL-SI, Washington, DC 20301-0103

References:
AR 71-9, “Materiel Requirements.”
TRADOC Pam 71-9, “Requirements Determination.”

Introduction

Horizontal Technology Integration (HTI) is the common application of enabling technologies across multiple systems to increase force effectiveness. HTI is the key enabler of the Army modernization strategy. In an era of declining Research, Development, and Acquisition (RDA) budgets, the Army must be able to carry out its modernization program with fewer resources. HTI offers the potential for significant cost savings, through the application of common technologies across multiple systems. Common technologies, common components and common development programs will reduce acquisition program costs and operations and support (O&S) costs through improved economies of scale. HTI will keep the Army's modernization program affordable by maximizing the return on investment for each RDA dollar.

Scope

Army HTI policy is defined in AR 71-9 and AR 70-1. These policies govern the establishment and execution of all Army HTI programs. This policy will not supersede the DoD 5000 series of regulations or Army regulations and policies (e.g. AR 70-1, Army Technical Architecture, etc.). Rather, this policy will clarify how HTI programs can be conducted within those existing regulations. HTI programs can originate from any source, to include ideas from outside the Army. While the primary focus of this document is on upgrades to weapon system platforms, any Army system, subsystem, or component may qualify for HTI status. The range of eligible items includes but is not limited to sensors, weapons, munitions, automated information systems, software components, spare parts, platform components (such as rocket motors or sensors) and materials. HTI programs can originate in another service as part of a joint effort or from a commercial or industrial area and be applied to Army programs, as part of a joint effort. HTI is intended to be as broadly inclusive as possible in order to realize maximum savings.

HTI Vision

HTI is the preferred method to achieve new or improved warfighting capability in weapon system programs. The goal of HTI is to maximize the commonality of systems and components across components. Warfighters will benefit from the increased modernization of capabilities at lower unit cost and lower O&S costs. Under Training and Doctrine Command's (TRADOC) Requirements Determination process, users will consider the potential of HTI in developing the full range of Doctrine, Training, Leader Development, Operations, and Materiel (DTLOM) for Army XXI. Requirements documents will identify required capabilities that are common to a family of systems. In the acquisition community, science and technology efforts will focus on developing capabilities for multiple applications. Acquisition strategies and plans will routinely apply the principles of HTI from the initiation of the program. Finally, logistics planners will develop supportability plans that take advantage of the common nature of the systems.

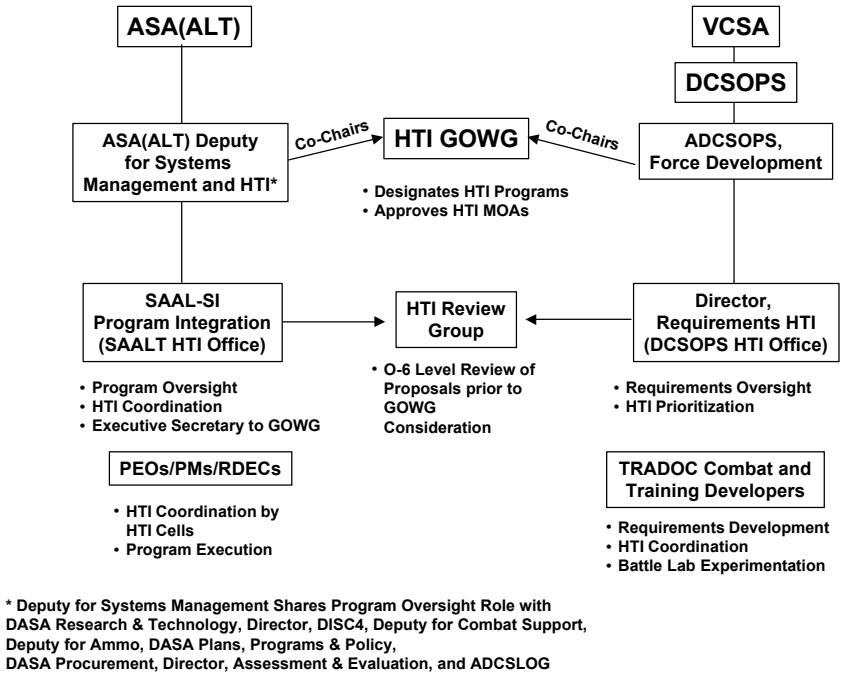


Figure XX- 1. Primary HQDA HTI Organizations

HTI Organizations

The designation, management and oversight of HTI programs is the responsibility of several different organizations within the Department of the Army (DA). Starting at the top with the Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA(ALT)) and the Vice Chief of Staff of the Army (VCSA) down to the Program Managers (PMs) and TRADOC System Managers (TSMs), HTI is executable within existing Army organizations. Figure XX-1 shows the primary HTI offices of the Headquarters, Department of the Army.

General Officers Working Group

The HTI General Officers' Working Group (GOWG) is responsible for the Army HTI program. The GOWG also is responsible for designating Army HTI programs. All HTI programs designated by the GOWG will still report through their respective Program Executive Officers (PEOs) / Major Commands (MACOMs) to the AAE.

The OASA(ALT) Director for Program Integration (SAAL-SI) is the Executive Secretary to the GOWG and is responsible for organizing and supporting all GOWG meetings. The Director for Program Integration and the Assistant Deputy Chief of Staff, Operations and Plans (ADCSOPS) (Force Development), Director, Requirements are responsible for providing support to their respective superiors, the co-chairs of the GOWG. Both of these offices are responsible for organizing and chairing the HTI Review Group. The DCSOPS and SAALT HTI offices will monitor all HTI programs and issues and ensure coordination of HTI programs in the Planning, Programming, Budgeting and Execution System (PPBES) cycle. They are the HTI contacts at the HQDA level. HTI Programs will be assigned to HQDA action officers in the same manner as other acquisition programs.

The HTI Review Group is composed of representatives from the offices of GOWG members and reviews HTI program proposals before they go to the GOWG. The group meets at the call of the HTI Executive Secretary prior to each GOWG meeting to review HTI presentations and ensure they are sufficiently developed

for GOWG consideration. If the group finds a presentation lacking in some respect, it will recommend changes that must be made before it can go to the GOWG.

At PEOs, MACOMs, and Major Subordinate Commands (MSCs), organizations responsible for acquisition or requirements determination will designate an HTI Point of Contact (POC) to coordinate their efforts. These HTI POCs are responsible for organizing and participating in the Integrated Product Teams (IPTs) and will assist in evaluating HTI proposals. The HTI evaluation process is described below. The HTI POCs will also be responsible for identifying HTI candidates within their own organizations and investigating the applicability of other HTI candidates to systems under their purview.

The actual management and execution of HTI programs will remain in the field, largely within the PEO / PM / Research, Development and Engineering Center (RDEC) structure. The PMs and RDECs will lead the Research, Development, and Acquisition of HTI programs. If the lead PEO for an HTI program deems it necessary, it will recommend to the AAE that a PM be established for that HTI program. The Army Materiel Command (AMC) and other Army Materiel Developers (MATDEVs) will be players in this process for those HTI programs that fall under their responsibilities. TRADOC organizations and other Combat Developers (CBTDEVs) will lead the requirements determination effort required for HTI execution. The horizontal requirements integration effort will occur early in the process, generally before the configuration of the HTI system has been defined.

The HTI Process

The HTI process proceeds in parallel with and as a part of the normal requirements and acquisition process. HTI programs must go through the same acquisition milestones and operate under the same levels of oversight as other programs. The HTI process exists to keep the HTI effort coordinated with the programs that are the end users for the HTI item. HTI provides increased visibility for a program in the resourcing process and provides a forum where issues over HTI programs can be resolved.

The HTI Process recognizes two basic approaches to identifying and executing HTI programs. The first approach is the HTI Initiative. HTI Initiatives are not focused on a specific end item, but rather concentrate on identifying multiple HTI programs within a given technology or operational capability. Past examples of HTI Initiatives include “Own the Night,” “Combat Identification,” and “Smart Weapons/Precision Guided Munitions.” Each of these initiatives has led to multiple HTI programs based around a specific technology or operational need. The HTI Initiative in general will require the formation of a general officer level Task Force to identify and recommend HTI programs, or the designation of an Army Center of Excellence to take primary responsibility for that area of technology. Because of the high profile nature of HTI Initiatives, HQDA anticipates limiting the Initiative approach to those proposals that have the highest potential pay-off in terms of cost or operational effectiveness.

HTI programs are the final output of HTI Initiatives, but they can also emerge independently of any formal initiative. HTI programs involve the specific application of a technology solution to a materiel requirement for multiple platforms. HTI programs will usually have specific end items that will be furnished to participating platforms for integration. However, the HTI program could also involve more “conceptual” end items such as software or algorithms.

HTI Proposals

All HTI proposals whether for an initiative or a program must follow the same proposal requirements and the same basic evaluation process. All HTI proposals should be no more than 4 pages in length, have a sponsoring government agency and include the following:

- *Title*
- *Sponsoring Organization(s):* (e.g. TARDEC, PEO ASM, etc.)
- *Description of Technology Used & Its Implications:* What kind of technology? What capabilities does it offer?
- *Description of Benefit to Warfighter:* How will the idea help the warfighter?
- *Potential Applications:* Which systems could use the idea?
- *Potential Cost Savings from HTI Approach*.
- *Management:* Who should manage the program/initiative? What will be the management structure?

All HTI proposals should be sent to the Headquarters, Department of the Army (HQDA) HTI Office:

HTI Proposals
OASA(ALT), Attn: SAAL-SI
103 Pentagon, Room 2E673
Washington, DC 20310-0103

Electronic copies can be sent via email to “hti@sarda.army.mil”. MS Word 6.0/7.0 and MS PowerPoint 4.0 or 7.0 files are preferred.

PHASE 1: Initial Evaluation Process

As indicated in Figure XX-2, sponsors send their completed HTI proposals to the HTI GOWG Executive Secretary (the OASA(ALT) Program Integration Office—SAAL-SI). At least once per quarter, the Executive Secretary will convene the Army HTI Review Group to examine all new HTI proposals. The Army HTI Review Group is composed of the primary HTI POCs from SAALT, DCSOPS, TRADOC and AMC. The Review Group is responsible for determining whether the proposal meets the minimum information requirements, determining whether it is for an initiative or a program, determining whether it overlaps with existing HTI efforts, and ensuring that it merits a thorough evaluation. The Review Group may prevent proposals from going forward if they lack sufficient detail or have other obvious deficiencies. Sponsors may resubmit proposals once the problems are corrected.

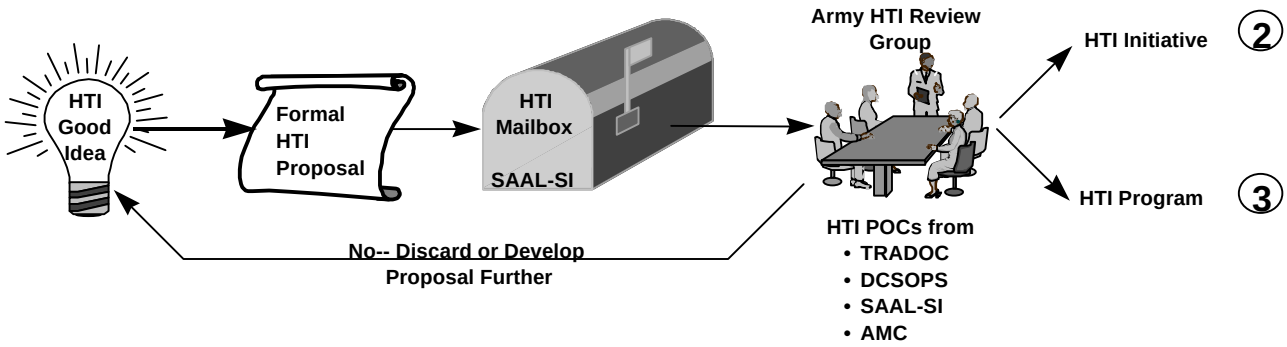


Figure XX- 2. Initial Evaluation

Once the Review Group reaches a conclusion about the scope (initiative vs. program) and the sufficiency of detail of the proposal, its members then recruit from their organization volunteers to serve on the proposal evaluation working group. In identifying potential volunteers, the Review Group will seek to get representation from the most directly affected organizations. SAALT recruits volunteers from the PM/PEO community. AMC recruits volunteers from among its PMs and the RDECs. TRADOC and DCSOPS recruit volunteers from the branch centers. In this way the evaluation working groups will represent the views of the user community, the technology community and the acquisition community.

PHASE 2: HTI Initiative Evaluation

HTI Initiatives, as described above, cover a general area of technology or operational need and are implemented by a formal HTI Initiative Task Force. HQDA intends for HTI Initiatives to be few and far between. The HTI GOWG will only approve those initiative proposals that offer an exceptionally large payoff in terms of cost or operational capability. It is within that context that the initiative Evaluation Groups will do their work. Figure XX-3 lays out the evaluation steps for a successful HTI Initiative.

The HTI Initiative Evaluation Work Group is organized at the invitation of the Army HTI Review Group. The Review Group invites appropriate representatives from TRADOC, the PEOs & PMs, AMC, and the RDECs & Labs to participate in the evaluation of a given HTI initiative proposal. In certain circumstances, the Evaluation Group may be asked to evaluate a set of related proposals that could be combined into a single

initiative. The Review Group will designate the members of the Evaluation Group, designate a chairman of the group and establish a deadline for the completion of their work.

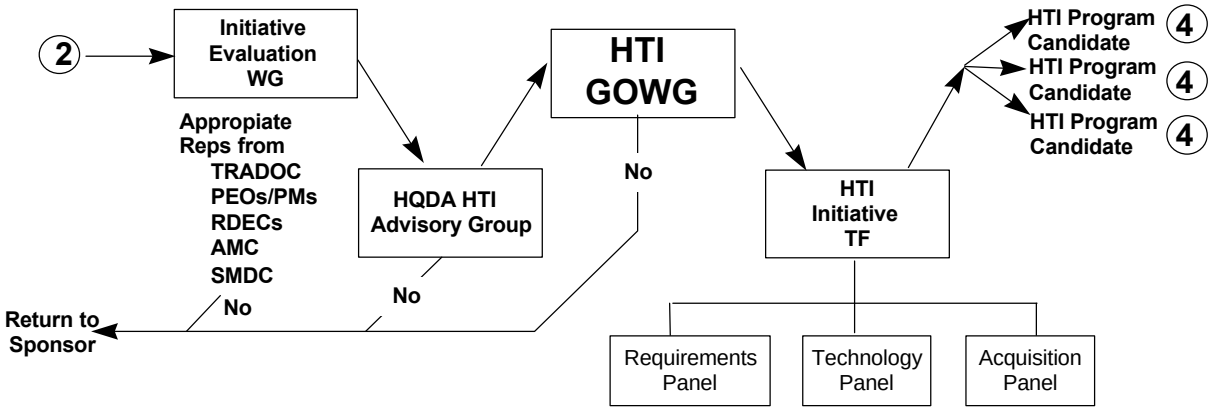


Figure XX- 3. Initiative Proposals

HQDA anticipates that the members of the Evaluation Group will perform the bulk of their work via electronic media, coming together for face-to-face meetings only when absolutely necessary. The Evaluation Group will consider HTI initiative proposals according to the following criteria: potential cost benefit to the Army, potential warfighter benefit to the Army, technical maturity and feasibility. The Evaluation Group must assess the return on investment that the Army can expect from the proposed initiative compared to current, planned Army acquisition efforts. The Evaluation Group should send forward for GOWG consideration those initiatives that have a realistic chance of generating very large cost savings/avoidance and/or offer a "leap-ahead" operational capability. The Evaluation Group must develop an explicit estimate of the costs and benefits of the proposed initiative and compare them to the costs and benefits of current planned programs. Successful initiatives must offer ample benefits to offset the cost of pursuing a special task force and limiting the flexibility of participating platforms. As a general guideline, HTI Initiatives should be capable of generating cost savings/avoidance measured in BILLIONS of dollars and/or should offer an unprecedented expansion of operational capabilities. Initiatives that promise only limited cost benefits or steady improvement to existing capabilities should NOT go forward to the GOWG.

The Evaluation Group in the course of its deliberations will solicit comments and input from all potential users, PMs for potential participating platforms, interested RDECs and labs, and, if the group deems appropriate, industry partners. The Evaluation Group may request that the proposal sponsor submit additional cost or technical data to aid the group in making its estimates of the benefits of the initiative. In general, HQDA will NOT fund any special analyses or studies to determine whether a proposed initiative has merit. If the Evaluation Group deems such studies necessary, it is incumbent upon them to identify resources to pay for the effort.

If the Evaluation Group determines that an initiative proposal does not offer sufficient benefits to warrant GOWG consideration, it will notify the sponsor of its decision and explain the rationale for the recommendation. The sponsor may resubmit its proposal for the initiative once the specific deficiencies identified by the Evaluation Group have been remedied. If the sponsor disagrees with the conclusions or estimates of the Evaluation Group, it may appeal the decision to the Army HTI Review Group, provided the sponsor can offer a credible analysis supporting their position. The Army HTI Review Group may then ask the Evaluation Group to reconsider its position or it may form a new Evaluation Group to reexamine the proposal.

If the Evaluation Group finds a proposal worth further action, it will forward the proposal to the GOWG for consideration. The chair of the Evaluation Group will work with the proposal sponsor to assemble a decision brief for the GOWG. Include in the decision brief for the GOWG, a management plan and draft Charter empowering the execution of the initiative. The draft Charter should be ready for SAALT Military Deputy and DCSOPS signature. The sponsor will present the bulk of the proposal, while the Evaluation Group chair will present the results of the proposal assessment. The decision brief will first go before the HQDA HTI Advisory

Group that will evaluate the brief for completeness and compliance with GOWG standards. The final decision brief then goes before the GOWG for a decision on whether or not to approve the new HTI Initiative.

If the GOWG rejects the proposed initiative, it may or may not recommend changes that would allow the proposal to go forward at a later date. In these circumstances, the GOWG will also lay down the process for reconsidering a modified proposal. Sponsors should note that GOWG decisions may not be appealed. If the GOWG approves the proposed HTI Initiative, the sponsor and the Evaluation Group will form the core of the HTI Initiatives Task Force that will consider the initiative. The sponsor and Evaluation Group will work together to set up the special task force in accordance with applicable Army Regulations.

Once established the HTI Initiative Task Force will meet to develop potential HTI program candidates out of the overall technology area of the Initiative. The Task Force will use a Requirements Team, a Technology Team, and an Acquisition Team to build concepts for HTI programs that will meet the needs of multiple platforms. HQDA expects HTI Task Forces to get a consensus from all users and platforms that will participate in a new HTI program. The Task Force will resolve all requirements issues, competing technology issues and acquisition plan issues before sending a proposed HTI program proposal to the GOWG for approval. Task Forces will rely on active GO/SES involvement to ensure that their decisions are executable. Once a Task Force HTI program proposal reaches the GOWG, it is treated like any other program proposal for evaluation and execution.

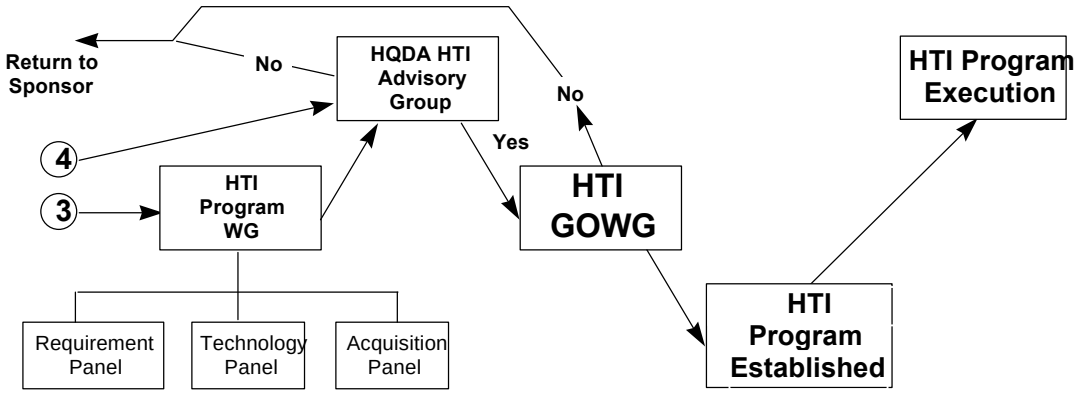


Figure XX- 4. Program Proposals

PHASE 3: HTI Program Proposal Evaluation Process

HTI program proposals are handled in a slightly different fashion than initiative proposals (see Figure XX-4). Program proposals focus on a single technology application or technology solution that can meet operational requirements for multiple platforms. Once the Army HTI Review Group has determined that a proposal is for an HTI program, it will designate appropriate representatives from TRADOC, the PEOs/PMs, the RDECs and Labs to participate in the HTI Program Working Group. The Program Working Group will conduct its evaluation by breaking into three panels: Requirements, Technology and Acquisition. The Requirements Panel will consist primarily of TRADOC and user representatives and will determine whether legitimate requirements exist for the proposed program. The panel will also determine to what degree the proposed program will improve operational capabilities in comparison to existing or planned programs. Finally, the Requirements Panel must assess to what extent, if any, existing requirements documents should be rewritten to accommodate the proposed program. The Technology Panel will draw most of its members from the RDECs and Labs and will assess the maturity and feasibility of the proposed technology application. In particular, the Technology Panel will assess the level of technical risk posed by the proposed program in comparison to existing or planned efforts. The Acquisition Panel will draw its membership from the PEOs and PMs of potential host platforms. The panel will assess the potential cost savings/avoidance of the proposed program and the program risks posed to the host platforms by using the HTI solution over existing ones. The Acquisition Panel will also develop a basic acquisition strategy for the proposed program, if warranted. Once the panels have completed their assessments, all members reconvene as the HTI Program Working Group to compare their results and determine whether the proposed program is worth pursuing.

If the Program Working Group finds a proposal worth further action, it will forward the proposal to the GOWG for consideration. The chair of the Program Working Group will work with the proposal sponsor to assemble a decision brief for the GOWG. Include in the decision brief for the GOWG, a management plan and draft Charter empowering the execution of the initiative. The draft Charter should be ready for SAALT Military Deputy and DCSOPS signature. The sponsor will present the bulk of the proposal, while the Program Working Group chair will present the results of the proposal assessment. The decision brief will first go before the HQDA HTI Advisory Group that will evaluate the brief for completeness and compliance with GOWG standards. The final decision brief then goes before the GOWG for a decision on whether or not to approve the new HTI program.

Post GOWG Approval

Once the GOWG formally designates an HTI program or initiative, that program must still proceed progression of the Army Systems Acquisition Review Council (ASARC) / Information Technology Overarching Integrated Product Team (IT OIPT) process. HTI programs, depending on their stage of development prior to designation, face the same milestone decisions as other acquisition programs. Figure XX-5 shows the entire HTI Evaluation Process

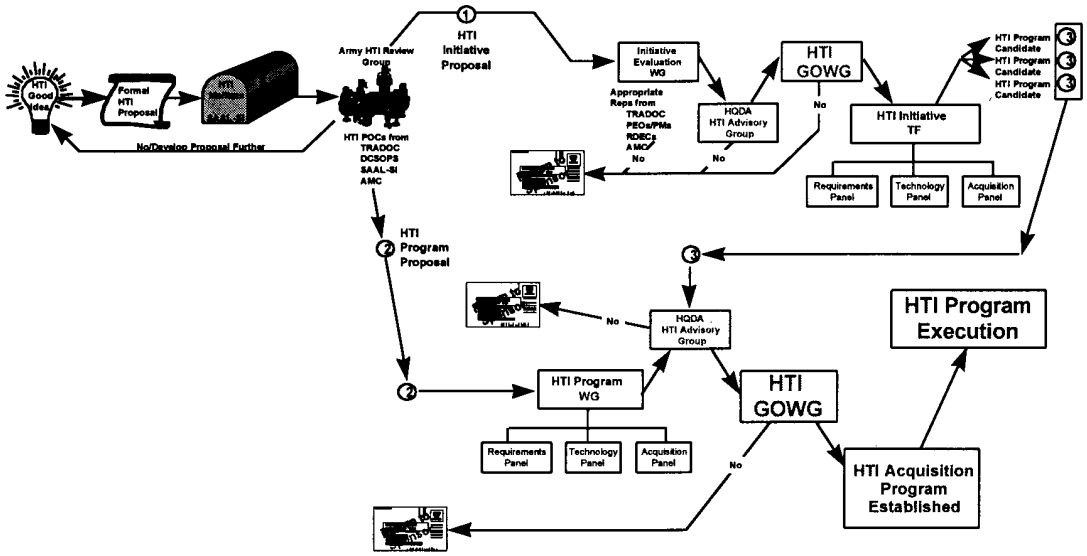


Figure XX- 5. The Complete Evaluation Process

Requirements Coordination

TRADOC participation in the HTI Proposal Evaluation process will lead to an assessment of the scope of requirements coordination needed for proposed initiatives and programs. Once HTI programs like any other technology development or acquisition effort. HTI designation has no impact on the and initiatives are designated by the GOWG, TRADOC will undertake any necessary requirements revision and the issuance of revised Mission Needs Statements (MNSs) or Operational Requirements Documents (ORDs) for the host platforms. In many instances, the HTI item will meet or exceed the requirements documents and no modification will be required. In cases where the HTI item does not meet the existing requirements or would result in a dramatic increase in capability, then TRADOC will need to take action to revise the MNS or ORD. It is the responsibility of the TRADOC representative on the GOWG to ensure that the necessary revisions and coordination of requirements documents takes place in the shortest possible time after the GOWG.

HTI Program Management and Execution

Once the GOWG designates an acquisition effort as HTI, it will recommend a lead acquisition management office for the effort. That lead office (be it a PEO or MSC) determines whether the HTI Program can be managed by an existing office or if a new office specific to the HTI program needs to be chartered. If the latter is the case, then the establishment of the new office takes place according to the normal acquisition process. In certain cases (e.g. common components), the HTI program may be managed under an existing PM office that either developed the initial idea or that is best suited to running the program. At the end of this process there will be one PM office (the HTI PM) responsible for leading the HTI acquisition effort in coordination with the Host Platform PMs.

The primary difference in managing an HTI acquisition program lies in the coordination between the HTI PM and the host platform PMs. When the HTI PM Office is set up (whether under an existing PM or as a new PM), the HTI program is assigned Program Element Numbers (PEs) and Standard Study Numbers (SSNs), as necessary, for funds tracking. Programs that are further along in development may already have their PEs and SSNs established. This is usually the case for HTI Item procurement that usually draws on the modification SSNs of the HTI host platforms. A Management Decision Package (MDEP) is created for the program and it must compete in the PPBES process for resources like any other program. Once the PM structure for the HTI program is established, the HTI PM must negotiate Memorandums of Agreement (MOAs) with the host platform PMs. The MOAs are, in effect, contracts between the PMs to govern their joint efforts to develop the HTI system. Each MOA describes the responsibilities and obligations of both the HTI PM and the host platform PM.

Under the MOAs, the HTI PM is responsible for developing and procuring the HTI “B” Kit. The “B” Kit is the main module, component or subsystem of the HTI objective system. The “B” Kit is integrated into the host platform by means of the HTI “A” Kit. Each host platform PM is responsible for developing and procuring their own “A” Kit that will allow their platform to use the “B” Kit. Host platform PMs will program “A” Kit development work and procurement into their overall system program plan. When the program moves into procurement, the host platform PMs program procurement funds to cover the purchase of the HTI “B” Kits for their platforms. When these funds are appropriated, HQDA will divert these procurement funds to the HTI PM to procure the needed HTI “B” Kits. During the PPBES cycles, all efforts (POM development, Prioritization Drills, etc.) will be coordinated between the HTI PM and the host platform PMs. In PPBES, the HTI PM is responsible for the overall HTI program profile.

While the MOAs provide an agreed-upon division of responsibilities for the HTI program, the HTI PM and the host platform PMs must also follow the applicable DoD and HQDA policies in managing their efforts. In particular, AR 70-1 establishes the PPBES responsibilities for HTI PMs and host platform PMs working on HTI programs that will modify existing systems. The policy stipulates that any unresolved allocation issues (especially those resulting from differences between amounts budgeted and funds received) relating to HTI procurement funds will be resolved by HQDA (SAAL-ZR).

Appendix XXI
Warfighter Rapid Acquisition Program (WRAP)

Points of contact:
Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 103 Army Pentagon, ATTN: SAAL-ZD, Washington, DC 20301-0103
Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 103 Army Pentagon, ATTN: SAAL-SR, Washington, DC 20301-0103

Reference:
TRADOC Pam 71-9, "Requirements Determination."

Introduction and Purpose

This Appendix provides the guidance, process, organizational structure, and responsibilities governing management of the Army's accelerated procurement of systems that have been identified through Training and Doctrine Command (TRADOC) Warfighting Experiments as compelling successes which satisfy urgent needs. WRAP process has been implemented within existing Army structures and organizations. It is compatible with the Federal Acquisition Regulations and DoD/Army Acquisition Policy (DoDD 5000.1/5000.2R and AR 70-1), and is consistent with the objectives of the National Performance Review and DoD acquisition reform initiatives.

Guidance

TRADOC determines all future warfighting requirements. TRADOCs mission is to maintain battlefield superiority through definition of horizontally integrated doctrine, training, leader development, organizational design, materiel, and soldier requirements. To accomplish this mission, TRADOC-led Integrated Concept Teams (ICTs) experiment with changing methods of warfare. This experimentation is directed at assessing the performance of modern systems and technologies in the hands of the American soldier in a realistic live combat environment.

WRAP Process

The WRAP process is a bridge linking TRADOC experimentation and systems acquisition. WRAP provides the Commanding General, U.S. Army Training and Doctrine Command (CG, TRADOC) a mechanism to accelerate the acquisition of selected operational warfighting enhancements borne of successful warfighting experiments. The WRAP concept applies to Advanced Warfighting Experiments (AWEs), Advanced Technology Demonstrations (ATDs), Advanced Concept Technology Demonstrations (ACTDs) or similar demonstrations and evaluations.

The warfighting experimentation process is described in TRADOC Pam 71-9. Experiments are planned, conducted and reported by battlefield laboratory teams. Representatives on the team vary based on the specific nature of the experiment. Advanced Warfighting Experiments will have large teams including multiple battlefield laboratories, Combat Developers (CBTDEVs), Training Developers (TNGDEVs), doctrine developers, Materiel Developers (MATDEVs), Science and Technology (S&T), TRADOC Analysis Center (TRAC), Operational Test and Evaluation Command (OPTEC), industry, academia, etc. Small experiments (Concept Experimentation Programs (CEPs) and Battle Lab Experiments (BLEs)) may have a team composed of personnel from a single battle lab; the school sponsor; the OPTEC Test and Evaluation Coordination Officer (TECO); and, for a technology or materiel item, MATDEV/S&T representatives. The team prepares the Battle Lab Experimental Plan (BLEP). The team integrates combat, materiel, and experiment objectives into a warfighting experiment and the BLEP details the goals, resources, and methodology of the experiment. Disposition of the results (experiment further, invest, or discard idea) is determined by the Battle Lab Board of Directors (BOD). The BOD determines if any of those selected for investment represent a compelling success for an urgent need and should be recommended by CG TRADOC as a WRAP candidate for approval by the WRAP Army Acquisition Review Council (ASARC).

The CG or DCG TRADOC chairs the Battle Lab BOD. Core members include the HQ TRADOC Deputy Chiefs of Staff for Combat Developments (DCSCD), Doctrine (DCSDOC), and Training (DCST) and the Directors or Vice Directors of the TRADOC chartered Battle Labs. Associate members are the DA DCSOPS, AMC Deputy Chief of Staff" for Research, Development, and Acquisition (DCSRDA), and Director of Army Research Office. The BOD meets at the discretion of CG/DCG TRADOC, normally annually in the May-June time frame.

WRAP ASARC Documentation

An updated BLEP and an Operational Requirement Statement for Rapid Acquisition need to be submitted to the Assistant Deputy Chief of Staff for Operations and Plans, Force Development (DAMO-FD), forty-five days prior to a WRAP ASARC. The BLEP is supplemented with an urgency of need statement, experimentation results documenting compelling success, an acquisition strategy, and a budget estimate for the proposed program. The Operational Requirement Statement for Rapid Acquisition contains:

1. Defense Planning Guidance (DPG)—annotate supporting paragraphs from latest DPG;
2. Threat—address all threats to system, expected mission accomplishments, and why requirement is important and urgent;
3. System Requirement—in operational terms address what the system is expected to do: key performance parameters, other requirements, objective/future requirements (potential growth or new technology);
4. Constraints (if necessary)—specify any parameters that could limit system capabilities.

WRAP ASARC Decision

A WRAP ASARC determines if candidates warrant rapid acquisition and are affordable, effective, sustainable, and suitable. A WRAP ASARC:

1. Reviews requirement and urgency.
2. Reviews affordability.
3. Reviews experimentation results.
4. Approves an acquisition strategy.
5. Assigns management responsibilities to Army Materiel Command (AMC) Advanced Concept Manager (ACM) or designated Program Executive Officer (PEO) / Program Manager (PM).
6. Assigns a milestone entry point as appropriate.
7. Approves a funding strategy (identify immediate funding, commit to reprogramming action, defer to the Planning, Programming, Budgeting and Execution System (PPBES) cycle).

Candidates may be submitted to a WRAP ASARC at any time. Funding of unfunded requirements is improved within the long range RDA prioritization and planning process if the WRAP ASARC meets during the first or early second quarter of the fiscal year. Candidates approved for rapid acquisition are not guaranteed immediate funding even if submitted in time to place funding in budget and programming documents. Approved programs are funded as prototypes for two years. Subsequent funding is the responsibility of the appropriate Battlefield Operating System.

WRAP ASARC Membership

A WRAP ASARC consists of the senior acquisition managers and functional principals, or their designees, shown in Figure XXI-1.

Military Deputy to the Assistant Secretary of the Army (Acquisition, Logistics and Technology), Co-Chairman.
Assistant Deputy Chief of Staff for Operations and Plans, Force Development (DAMO-FD), Co-Chairman.
Deputy Under Secretary of the Army (Operations Research) (DUSA(OR))
Assistant Secretary of the Army (Financial Management and Comptroller) (ASA(FM&C))
Assistant Secretary of the Army (Installations and Environment) (ASA(IE))
CG, U.S. Army Materiel Command (CG, USAMC)
CG, U.S. Army Training and Doctrine Command (CG, USATRADOC)
General Counsel.
Director, Information Systems for Command, Control, Communications, and Computers (DISC4)
Deputy Chief of Staff for Logistics (DCSLOG)
Deputy Chief of Staff for Personnel (DCSPER)
Director, Program Analysis and Evaluation (DPAE)
CG, Operational Test and Evaluation Command (CG, OPTEC)
CG, Space and Missile Defense Command (CG, SMDC)

Figure XXI-1. WRAP ASARC Membership

Procedures

Assistant Secretary of the Army (Acquisition, Logistics and Technology) (ASA(ALT)):

1. Establishes a point of contact for TRADOC WRAP initiatives to facilitate communications WRAP candidates within HQDA.

2. Participates in the TRADOC process through appropriate Program/Project/Product Manager (PM) support.

3. Convenes a WRAP ASARC, at the request of the CG, TRADOC.

4. Co-chairs WRAP ASARC.

Assistant Deputy Chief of Staff for Operations and Plans, Force Development (ADCSOPS-FD):

1. Establishes a point of contact for TRADOC WRAP initiatives.

2. Maintains a streamlined process for validation and prioritization of requirements identified by CG, TRADOC.

3. Co-chairs WRAP ASARC.

Director of Information Systems for Command, Control, Communications and Computers (DISC4):

1. Establishes a point of contact for TRADOC WRAP initiatives to expedite coordination of C4 WRAP candidates within HQDA.

2. Reviews WRAP candidate systems for compliance with HQDA policy for software reuse, C4I architectures (technical, operational and systems), data element standardization, spectrum management, and Ada initiatives.

Deputy Chief of Staff for Logistics (DCSLOG):

1. Reviews WRAP initiatives to establish the Army logistics position concerning acceptability, deployability and supportability.

2. Provides recommendations to WRAP ASARC regarding adequacy and feasibility of logistics planning for rapid acquisition of candidate Systems.

Director, Program Analysis and Evaluation (DPAE):

Establishes and maintain a streamlined process for balance, affordability and executability analysis for WRAP candidates identified by CG, TRADOC.

Assistant Secretary of the Army (Financial Management and Comptroller) (ASA FM&C):

1. Provides cost analysis participation in the TRADOC ICT as required.

2. Provides independent cost assessment of WRAP candidates in support of WRAP ASARC.

3. Provides financial management support consistent with the language presented in AR 70-1, Army Acquisition Policy.

CG, U.S. Army Training and Doctrine Command (CG, TRADOC):

1. Requests Advanced Concept Manager (ACM) and Technical Integration Manager (TIM) from CG, AMC (or other appropriate MACOM) to support a warfighting experiment as part of the TRADOC ICT. The ACM and TIM are responsible for acquisition support and strategy, and technology integration, respectively.

2. Requests the ASA(ALT) convene a WRAP ASARC when an urgent need and compelling success is identified.

3. Approves for each WRAP candidate an Operational Requirement Statement to Support Rapid Acquisition, and an updated BLEP supplemented with a statement for compelling success and urgency, experimentation results, acquisition strategy, and a cost estimate for the total program.

4. Assures that prior to the acquisition decision, that Doctrine, Training, Leader Development, Organizations, Materiel and Soldiers (DTLOMS) considerations are satisfied.

CG, U.S. Army Materiel Command (CG, AMC) (or appropriate MACOM):

1. When requested by CG, TRADOC, appoints an ACM to the TRADOC ICT responsible for:

a. Acquisition management in direct support of warfighting experiment execution and planning, and for subsequent rapid acquisition initiative.

b. Acquisition strategy and funding profile to supplement the BLEP for preparation of WRAP ASARC.

2. When requested by CG, TRADOC, appoint a TIM to the TRADOC ICT responsible for integration of relevant Advanced Technology Development Programs and other science and technology initiatives.

3. Provides technology, acquisition and logistics assessment for presentation to WRAP ASARC.

4. Participates, by means of the developmental test and evaluation agencies, in the TRADOC ICT to provide planning for warfighting experiments and follow-on acquisitions.

CG, U.S. Army Operational Test and Evaluation Command (CG, OPTEC):

1. Participates in the TRADOC ICT to provide guidance and planning for collection and evaluation of data for warfighting experiments that are sufficient to support WRAP ASARC decisions.

2. Provides independent assessment of experiment results concerning acceptability of WRAP candidates for rapid acquisition.

Appendix XXII
Fast Track Acquisition Program

Point of Contact: Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 103 Army Pentagon, ATTN: SAAL-ZT, Washington, DC 20301-0103

Introduction and Purpose

This Appendix provides the guidance, process, organizational structure and responsibilities governing management of the accelerated acquisition of very selective, high value, high priority technology developed within the Army Science and Technology program. The Fast Track Acquisition Program has been implemented within existing Army structures and organizations. It is consistent with the Federal Acquisition Regulations and DoD/Army Acquisition Policy (DoDD 5000.1, DoD 5000.2-R and AR 70-1), and is in keeping with the objectives of the National Performance Review and Department of Defense (DoD) acquisition reform initiatives.

Specifically, the Fast Track Acquisition Program implements two step acquisition, as recommended by the Army Science Board. It provides up front designation to a select few Advanced Technology Demonstrations (ATDs) that have a good chance of successful transition to the Engineering and Manufacturing Development (EMD) Phase. The Fast Track designation is essential in obtaining increased management attention from stakeholders. It also helps justify the expenditure of additional Science and Technology (S&T) funds preparing for program transition to the EMD Phase.

Guidance

The ultimate goal of the Army S&T program is to provide the warfighter with a winning edge on the battlefield. It is closely linked to Army force modernization, focusing on developing critical capabilities which address future warfighting needs, and delivering timely and affordable technologies that support the upgrading of existing systems and the fielding of next generation and future systems.

The Fast Track process applies to a few selected technology demonstrations which, as a result of earlier S&T efforts, appear to be sufficiently mature that:

1. They can be demonstrated during a 6.3 ATD program with moderate risk; and
2. There is a reasonable likelihood of skipping the Program Definition and Risk Reduction (PDRR) Phase and transitioning directly to the EMD Phase which is already funded in the Program Objective Memorandum (P0M). This results in measurable time and cost savings.

The Fast Track process is applicable to all Acquisition Categories (ACATs) subject to Army Systems Acquisition Review Council (ASARC), Army Information Technology Overarching Integrated Product Team (Army IT OIPT), or In Progress Review (IPR) oversight.

Fast Track Candidates

Fast Track candidates come from approved ATDs. Exceptions may be made for special access programs. ATDs are performed to demonstrate that a technology is sufficiently mature, and its contribution to military capability sufficiently understood, to be ready for transition to the next acquisition stage. On average, the Army Science and Technology Working Group (ASTWG) may recommend only one Fast Track candidate per year.

ATDs are characterized by the following:

1. Large scale both in resources and complexity;
2. Operator/user involvement from planning to final documentation;
3. Testing in a real and/or synthetic operational environment;
4. Finite schedule, typically five years or less; and
5. Cost, schedule, and objective performance baselined in an Advanced Technology Demonstration Management Plan (ATDMP).

Each ATD must meet or exceed exit criteria agreed upon by the user and the ATD manager at program inception (well before the tests begin) before the technologies in question transition to development. ATDs are described in detail in the Army Science and Technology Master Plan (ASTMP).

New ATDs are reviewed and recommended by Headquarters, Training and Doctrine Command (HQ TRADOC) and the Materiel Developer (MATDEV), and are approved by the ASTWG. The ASTWG is co-

chaired by the Army Science and Technology Executive (the Deputy Assistant Secretary for Research and Technology) and the Assistant Deputy Chief of Staff for Operations and Plans (Force Development).

Fast Track Process

The Fast Track process focuses on synchronizing technology candidates with the acquisition process. In the initial phase, Phase 0, the Army Science and Technology Working Group reviews, evaluates and recommends Fast Track candidates to the Milestone Decision Authority (MDA) for approval as a Fast Track program. The MDA evaluates not only the priority of the requirement and the maturity of the technology but also verifies that there is funding in the POM and Extended Planning Period (EPP) to take the technology through EMD and production.

Phase 0 continues for up to one year beyond the successful conclusion of the ATD to transition the S&T program to program management. This provides up to a one-year transition period for risk reduction initiatives and MS I/II decision review preparation. During this transition period, the MDA-identified EMD Program Manager (PM), and Program Executive Officer (PEO) or MATDEV EMD PM, requests placement of the Fast Track program in the appropriate ACAT and prepares all necessary documentation for the MS I/II acquisition review. If necessary, the ATD manager may request a formal transition review during the transition period prior to the Milestone (MS) I/II decision.

At the conclusion of Phase 0, the MDA will determine if the results of Phase 0 warrant approval for program establishment and entry into EMD. Once the program is approved for EMD, it follows normal life-cycle management requirements for MS III approval.

Requirements determination activities will be the responsibility of the combat development proponent who will establish a multidisciplinary Integrated Concepts Team (ICT). Deficiencies in current capabilities, and opportunities to provide new capabilities, will be expressed in broad operational terms in a Mission Need Statement (MNS). The validated MNS will be presented to the MDA prior to the Fast Track decision. Initial requirements will remain flexible. Participation by the ATD in a technical demonstration will assist the ICT in understanding the “art of the possible” and provide the basis for finalizing requirements before the end of Phase 0. These will be expressed as system performance objectives and thresholds in an Operational Requirements Document (ORD), and are developed from, and remain consistent with, the MNS. The ORD will be presented to the MDA prior to the MS I/II decision.

The Operational Test and Evaluation Command (OPTEC) will support Phase 0 by assisting in the design of experiments, collection of data, and evaluation of results. As OPTEC deems appropriate, data collected in Phase 0 will be used to support the MS III decision at the end of EMD. The reuse of appropriate data reduces the scope of testing during EMD.

Initially, the materiel developer establishes a single Integrated Product Team (IPT) with the ATD manager as chairman. The IPT is a fully integrated, stakeholder's team. Membership includes TRADOC, Department of the Army Staff (Deputy Assistant Secretary for Research and Technology, Deputy for Systems Management and Horizontal Technology Integration, etc.), PM, PEO or MATDEV, logisticians, S&T manager, OPTEC, and the Office of the Secretary of Defense (OSD) as appropriate. The IPT decides the appropriate program management structure. This may include establishing a Fast Track program under a PM, and PEO or MATDEV, management structure. The IPT initially addresses as minimum, affordability issues (including Cost as an Independent Variable), Integrated Logistics Support issues, Pre-Planned Product Improvement, Horizontal Technology Integration, producibility, and technical and operational testing. The IPT assists the designated PM in identifying the appropriate ACAT and preparing all necessary documentation for the MS I/II decision.

ASTWG approved Fast Track candidates may be submitted to the MDA for a MS 0 decision at any time. Fast Track designation is contingent upon sufficient funding in the POM and EPP to advance the technology to a MS I/II decision and through production. Fast Track designation is not a guarantee of funding. Fast Track programs compete for resources in the Deputy Chief of Staff for Operations and Plans (DCSOPS) Research, Development, and Acquisition (RDA) prioritization process. An approved Fast Track program loses the Fast Track designation if program funding falls out of the POM/EPP.

The Fast Track Acquisition Process is completed when the MDA convenes a MS I/II decision review. The MDA can approve a MS I/II decision and entry into EMD or, if the ATD was unsuccessful, approve entry into the PDRR Phase, or cancel the program.

Documentation for Fast Track Decision

The ATD manager is responsible for ensuring that the Army ATDMP and the validated MNS are available in addition to other documentation identified by the MDA as necessary for Fast Track designation. The ATDMP does not limit itself to the plan for the ATD and instead articulates the plan for the entire Phase 0 in-

cluding transition planning. In this form, the ATDMP is the Fast Track Acquisition Strategy. The ATDMP is supplemented with S&T experimentation results that assist the MDA in assessing the maturity level of the technology.

Fast Track Decision

To complete the Fast Track designation decision, the MDA takes the following actions:

1. Reviews Mission Need Statement.
2. Assesses technology maturity level.
3. Approves Advanced Technology Demonstration Plan.
4. Approves Phase 0 exit criteria.
5. Validates resources required to execute program and adequacy of follow-on resources.
6. Assigns PM, and PEO or MATDEV PM, to support ATD manager.
7. Approves the transition plan.

Documentation for Fast Track Milestone I/Milestone II

The MDA-designated EMD PM prepares for the MS I/II decision. The S&T program presents the results of Phase 0, transitions the S&T program to the PM, and assists the PM in preparation for the MS I/II decision. The user submits the Operational Requirements Document (ORD). The PM, and PEO or MATDEV, submits the Acquisition Program Baseline (APB), acquisition strategy, and EMD Phase exit criteria. The PM also obtains any other documentation identified by the MDA as necessary for the MS I/II review.

Fast Track Milestone I/Milestone II Decision

To complete the Fast Track Milestone I/II decision, the MDA takes the actions identified below.

1. Determines if the results of Phase 0 warrant continuation of the program,
2. Assesses the readiness of the program to proceed to EMD,
3. Approves a MS I/II decision, and
4. Approves Phase II Exit Criteria.

Fast Track Decision Review Membership

A Fast Track Decision Review consists of the following senior acquisition managers and functional principals, or their designees:

1. Military Deputy to the Assistant Secretary of the Army (Acquisition, Logistics and Technology), Co-Chairman.
2. Assistant Deputy Chief of Staff for Operations and Plans, Force Development, Co-Chairman.
3. Deputy Under Secretary of the Army (Operations Research) (DUSA(OR)).
4. Assistant Secretary of the Army (Financial Management and Comptroller) (ASA(FM&C)).
5. Assistant Secretary of the Army (Installations and Environment) (ASA(IE)).
6. CG, U.S. Army Materiel Command (CG, USAMC).
7. CG, U.S. Army Training and Doctrine Command (CG, USATRADOC).
8. General Counsel.
9. Director, Information Systems for Command, Control, Communications, and Computers (DISC4).
10. Deputy Chief of Staff for Logistics (DCSLOG).
11. Deputy Chief of Staff for Personnel (DCSPER).
12. Director, Program Analysis and Evaluation (DPAE).
13. CG, Operational Test and Evaluation Command (CG, OPTEC).

Procedures

Assistant Secretary of the Army (Acquisition, Logistics and Technology) (ASA(ALT)):

1. Establishes a point of contact for Fast Track initiatives to expedite coordination of Fast Track candidates within Headquarters, Department of the Army (HQDA).
2. Participates in the Fast Track process through appropriate PM and PEO support.
3. Convenes a Fast Track Decision review at the request of the ASTWG.

4. Convenes a transition review at the completion of Phase 0 in preparation for a Milestone I/II review, as needed, at the request of the ATD Manager. The purpose of this review is to ensure the smooth transition of the S&T program to the PM.

5. Co-Chairs the Fast Track Decision Review.

Director of Information Systems for Command, Control, Communications and Computers (DISC4):

1. Establishes a point of contact for Fast Track initiatives to expedite coordination of command, control, communications, and computer (C4) Fast Track programs within HQDA.

2. Reviews Fast Track candidate systems for compliance with HQDA policy for software reuse, C4I architectures (technical, operational and systems), data element standardization, and spectrum management.

3. Provides representation to the ICTs and IPTs.

Assistant Deputy Chief of Staff for Operations and Plans, Force Development (ADCSOPS-FD):

1. Establishes a point of contact for Fast Track initiatives.

2. Maintains a streamlined process for validation and prioritization of requirements identified by CG, TRADOC.

3. Co-Chairs the Fast Track Decision Review.

Deputy Chief of Staff for Logistics (DSCLOG):

1. Reviews Fast Track initiatives to establish the Army logistics position concerning acceptability, deployability and supportability.

2. Provides recommendations to Fast Track MDA regarding adequacy and feasibility of logistics planning for accelerated acquisition of candidate systems.

3. Establishes a point of contact for Fast Track initiatives to expedite coordination of Logistics Fast Track initiatives within HQDA.

Deputy Chief of Staff for Personnel (DCSPER):

*1. Establi*shes a point of contact for Fast Track initiatives.

2. Reviews Fast Track initiatives for overall manpower implications and to establish the Army MANPRINT/Human Systems Integration and Soldier Oriented Research and Development position.

3. Provides MANPRINT/Human Systems and Soldier Oriented Research and Development representation to the ICTs and IPTs.

Director, Program Analysis and Evaluation (DPAE):

Establishes and maintains a streamlined process for balance, affordability, and executability analysis for Fast Track candidates.

Assistant Secretary of the Army (Financial Management and Comptroller) (ASA(FM&C)), Deputy for Cost Analysis:

1. Provides cost analysis participation in the TRADOC ICT as required.

2. Provides independent cost assessment of Fast Track candidates in support of Fast Track milestone reviews.

3. Coordinates the development, and provide final approval, of the Army Cost Position, when appropriate.

CG, U.S. Army Training and Doctrine Command (CG, TRADOC):

1. Establishes Integrated Concept Teams (ICTs).

2. Approves requirements documentation.

3. Provides combat developer representation to IPTs and ensures Doctrine, Training, Leader Development, Organizations, Materiel, and Soldiers (DTLOMS) considerations are appropriately addressed.

CG, U.S. Army Materiel Command (CG, AMC) (or appropriate MACOM):

1. Serves as materiel developer for assigned Fast Track acquisition programs.

2. Provides materiel developer representation to ICTs.

3. Chairs the Integrated Product Team for assigned Fast Track acquisition programs.

4. Serves as the MDA on designated ACAT III programs.

CG, U.S. Army Operational Test and Evaluation Command (CG, OPTEC):

1. Participates in the ICT and IPT to provide guidance and planning for collection and evaluation of ATD test data that are sufficient to support Fast Track Milestone I/II decisions.

2. Observes ATDs and provide independent evaluation of ATD results concerning acceptability of Fast Track candidates for a Milestone I/II decision.

Program Executive Officer/Program Manager/Product Manager:

1. Participates in the ICT.

2. Participates in the IPT.

3. Supports the MS I/II review by preparing the Acquisition Program Baseline, Acquisition Strategy, Phase II exit criteria, and other all documentation identified by the MDA as required for the MS I/TI review.

4. Manages the formal acquisition program beginning with the transition of the S&T program from Phase 0.

5. Serves as the MDA on designated ACAT III programs.

Advanced Technology Demonstration Manager:

1. Chairs the IPT for designated programs.

2. Prepares the ATDMP.

3. Participates in the ICT.

4. Prepares for the Fast Track Decision review. Ensures that the minimum documentation required by the MDA for the Fast Track Decision review is available.

5. Manages the S&T program (Phase 0) of the materiel acquisition cycle.

6. Transitions management of the S&T program to the PM, and PEO or MATDEV PM at the appropriate point, usually following the successful completion of the ATD, but at least one year before the end of Phase 0.

7. Assists the designated PM in preparing for the combined Milestone I/II review.

8. Assists in ensuring that the minimum documentation required by the MDA for the MS I/II review is available.

Appendix XXIII

Program/Project/Product Management and Acquisition Command Decorations, Awards, and Honors

Point of Contact: Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 2511 Jefferson Davis Highway, ATTN: SAAL-ZAC (Suite 10100), Arlington, VA 22202-3911

Introduction and Purpose

This section provides guidance, criteria, and procedures governing the Secretary of the Army awards for Program/Project/Product Management and Acquisition Command. These awards recognize Army program, project, and product managers (PMs) whose outstanding accomplishments and contributions merit special recognition.

General information

The Secretary of the Army awards for Program/Project/Product Management recognize outstanding performance and overall management of the program, project, or product. Each award will consist of:

1. A suitably engraved plaque for the individual PM and the organization associated with the selected PM.
2. A letter of commendation signed by the Secretary of the Army or designated representative.

Any PM (military or civilian) that is established in accordance with AR 70-1 is eligible to receive the award. Awards will be limited to PMs in the grade of Lieutenant Colonel and Colonel/GS-14 and GS-15. PMs are nominated and selected under the criteria and procedures outlined in the procedures paragraph below.

The Secretary of the Army is the awarding authority for this program. The Army Acquisition Executive (AAE) is the Secretary of the Army's representative for the award. Awards may be granted in the following categories:

1. Program Manager of the Year.
2. Project Manager of the Year.
3. Product Manager of the Year.
4. Acquisition Command of the Year.

Within their respective organizations, Program Executive Officers (PEOs), Deputies for Systems Acquisition (DSAs), and Commanding Generals (CGs) of materiel development commands should ensure that outstanding achievements are properly recognized.

Procedures

Selection of nominees is based on the following evaluation criteria:

1. Resource management as follows:
   a. Financial management.
   b. Manpower management.
2. Management technique and innovations.
3. Program complexity.
4. Exceeding agreed upon program objectives.

Awards are granted annually for contributions made or completed during the previous fiscal year (ending September 30). Nominations should be submitted by November 1 each year to Headquarters, Department of the Army (HQDA, ATTN: SAAL-ZAC). The number of awards granted in each award category is at the discretion of the Secretary of the Army or the AAE.

Nominations should be approved by the PEO, DSA, or materiel developer commander prior to submission. Nominations sponsored by a PEO, DSA, or CG other than the nominee's parent organization should be submitted through the nominee's parent organization. Nominations are forwarded to review board members prior to the formal board review. Additional nominations may be added at this time. A HQDA review board will consider all nominations.

Each nomination should include ten copies of the following information:

1. Name, grade and organization title of the nominee.

2. A brief statement of the assigned responsibility of the nominee's organization. This information should be extracted from:

- Military: DA Form 67-9-1, *Significant Duties and Responsibilities.*
- Civilian: DA Form 7222-1, *Significant Duties and Responsibilities.*

3. A description of the outstanding achievements of the nominee as outlined in the format in Figure XXIII-1 for PM awards and Figure XXIII-2 for Acquisition Command award. This description will not exceed two single-spaced typed pages.

4. A biographical sketch of the nominee.

5. A 100-word unclassified summary of the nominee's outstanding achievements, suitable for use as a press release.

Secretary of the Army Award
For
Program/Project/Product Manager

Name and Grade:

Title:

Program:

Assignment Date:

Nominating Official:

ASSIGNED RESPONSIBILITY: (Extract this information from the Significant Duties and Responsibilities Section of DA Form 67-9-1 or DA Form 7222-1. Even though this area is not scored, the board members use this as a guideline in the scoring of other criteria.)

CRITERIA:

RESOURCE MANAGEMENT: (State achievements in both financial and manpower management.) MAXIUM SCORE: 10

a. Financial Management.

b. Manpower Management.

ACQUISITION STREAMLINING AND INNOVATIONS: (Self-explanatory).

MAXIMUM SCORE: 10

PROGRAM COMPLEXITY: (State if program is comprised of basket programs; include multiple interfaces; include details on how the program affects the acquisition community, etc.) MAXIMUM SCORE: 10

EXCEEDING AGREED UPON PROGRAM OBJECTIVES: (Self-explanatory.) MAXIMUM SCORE: 10

(NOT TO EXCEED TWO-SINGLE-SPACED TYPED PAGES)

Figure XXIII-1. Sample Nomination Format for PM Awards

Secretary of the Army Award
For
Acquisition Command

Name and Grade:

Title:

Program:

Assignment Date:

Nominating Official:

ASSIGNED RESPONSIBILITY: (Extract this information from the Significant Duties and Responsibilities Section of DA Form 67-9-1 or DA Form 7222-1. Even though this area is not scored, the board members use this as a guideline in the scoring of other criteria.)

CRITERIA:

RESOURCE MANAGEMENT: (State achievements in both financial and manpower management.) MAXIUM SCORE: 10

a. Financial Management.

b. Manpower Management.

ACQUISITION STREAMLINING REFORMS AND INNOVATIONS: (Self-explanatory).

MAXIMUM SCORE: 10

COMPLEXITY OF ASSIGNMENT: (Joint programs, levels of coordination/interaction, technology integration, reducing cost drivers/cycle time, types of contracts/programs, diversity of products/mission.) MAXIMUM SCORE: 10

CONTRIBUTIONS TO ACQUISITION COMMUNITY AND CUSTOMER SATISFACTION: (Self-explanatory.) MAXIMUM SCORE: 10

(NOT TO EXCEED TWO-SINGLE-SPACED TYPED PAGES)

Figure XXIII-2. Sample Nomination Format for Acquisition Command Awards

Appendix XXIV

Preparation Guide for ASARC/IT OIPT Acquisition Program Reviews

Points of contact:

Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 103 Army Pentagon, ATTN: SAAL-ZD, Washington, DC 20310-0103

Director of Information Systems Command, Control, Communications and Computers (DISC4), ATTN: SAIS-IAA-Q, 107 Army Pentagon, Washington, DC 20310-0107

Foreword

This guide reflects the recent Department of Defense (DoD) Acquisition Reform Initiatives and the experience of the parties involved who prepare this document. Questions concerning Army policy, procedures or content should be referred to the ASARC Executive Secretary in SAAL-ZD or the Chief, Program Evaluation in SAAL-DE. Questions related to IT OIPT reviews may be directed to DISC4.

1.0 Purpose

This document provides general guidance to the Department of the Army System Coordinators (DASCs) involved in the preparation of Army programs for the Army Systems Acquisition Review Council (ASARC) and for the Information Technology Overarching Integrated Product Team (IT OIPT). It provides an overview of the ASARC/IT OIPT process and serves as a reference for the conduct of a decision review. In addition, the guide includes a discussion of the Integrated Product Team (IPT) and the ASARC/IT OIPT processes. It also provides guidelines for the preparation of all necessary documentation and a suggested timeline for the events and activities leading up to the ASARC/IT OIPT review itself. The guide concludes with suggestions for the conduct of successful milestone decision reviews.

2.0 Background of the ASARC/DAB and IT OIPT/OSD IT OIPT Process

The ASARC is the decision review body for acquisition of major systems and Army Designated Acquisition Programs (ADAPs). It provides a structured forum at which issues requiring top-level consideration can be presented to the senior Army leadership. Department of Defense Directive (DoDD) 5000.1, Department of Defense (DoD) Regulation 5000.2-R and Army Regulation (AR) 70-1 govern the Army's Milestone Review process. The Defense Acquisition Board (DAB) is an Office of the Secretary of Defense (OSD) level forum that operates in much the same manner as the ASARC. The DAB and the ASARC differ in the level of their respective memberships and the Acquisition Category (ACAT) level of the programs they review (See Annex B). The DAB is chaired by the Under Secretary of Defense for Acquisition and Technology (USD(A&T)) and vice chaired by the Vice Chairman of the Joint Chiefs of Staff (VCJCS), whereas the ASARC is co-chaired by the Army Acquisition Executive (AAE) and the Vice Chief of Staff, Army (VCSA). The DoD IT OIPT, formerly known as the Major Automated Information Systems Review Council (MAISRC), operates in the same manner as the Army IT OIPT. The Army IT OIPT is co-chaired by the AAE and the Army Chief Information Officer (CIO). The DoD IT OIPT is chaired by the OASD(C3I).

3.0 ASARC/ IT OIPT Organization and Membership

The ASARC/IT OIPT provides senior acquisition managers and functional principals the opportunity to review designated programs at formal milestones to determine a program or system's readiness to enter the next acquisition phase. They make recommendations to the AAE and VCSA on those programs for which the AAE is the Milestone Decision Authority (MDA). In case of IT programs, they make recommendations to the Army CIO. In addition to these Milestone Reviews, the ASARC/IT OIPT may be convened at any time to conduct a formal review of the status of a program, or in the case of DAB Programs (ACAT ID), to determine the program's readiness for the DAB. The latter are subsequently reviewed by the DAB. In the case of DoD IT programs (ACAT IAM), the review is conducted to determine the program's readiness for DoD IT OIPT.

The ASARC/IT OIPT consists of the senior acquisition managers and functional principals shown in Tables XXIV-1 and XXIV-1a. Additional members can be added as necessary, based on the system under review. They are supported in the decision making process by IPTs comprised of representatives of each of the Army staff elements; acquisition support activities such as the Army Materiel Systems Analysis Activity (AMSAA) and Cost and Economic Analysis Center (CEAC); and the appropriate Program Executive Officer (PEO) and Program/Project/Product Manager (PM) Offices (PMO). These IPTs provide DA/OSD oversight and review while embodying the themes of teamwork, tailoring, and empowerment.

Table XXIV-1
ASARC Membership

Vice Chief of Staff of the Army—**Co-Chairman**
Army Acquisition Executive*—**Co-Chairman**
Deputy Under Secretary of the Army (Operations Research)
Deputy Under Secretary of the Army (International Affairs)
Assistant Secretary of the Army (Financial Management)
Assistant Secretary of the Army (Acquisition, Logistics and Technology)*
Assistant Secretary of the Army (Installations and Environment)
Assistant Secretary of the Army (Manpower and Reserve Affairs)
Commanding General, Army Materiel Command
Commanding General, Training and Doctrine Command
Office of the General Counsel
Office of the Inspector General
Director, Information Systems for Command, Control, Communications, and Computers
Deputy Chief of Staff for Logistics
Deputy Chief of Staff for Operations and Plans
Deputy Chief of Staff for Personnel
Deputy Chief of Staff for Intelligence
Chief, Army Reserve
Chief, National Guard Bureau
Chief, Legislative Liaison
Military Deputy to ASA(ALT)
Director, Program Analysis and Evaluation
Director, U.S. Army Cost and Economic Analysis Center
Commanding General, Operational Test and Evaluation Command

Additional Members as Required

Chief of Engineers
The Surgeon General
CG, Military Traffic Management Command
CG, U.S. Army Space and Missile Defense Command
Commander, U.S. Army Safety Center
Chief of Public Affairs
Director, Small and Disadvantaged Utilization Office (SADBU)
* Normally same person

Table XXIV-1.a
IT OIPT Membership

Director of Information Systems for Command, Control, Communications, and Computers/Chief Information Officer—Chairman
Assistant Secretary of the Army (Acquisition, Logistics and Technology)
Assistant Secretary of the Army (Financial Management)
Assistant Secretary of the Army (Installations and Environment)
Assistant Secretary of the Army (Manpower and Reserve Affairs)
Deputy Chief of Staff for Logistics
Deputy Chief of Staff for Operations
Deputy Chief of Staff for Personnel
Deputy Under Secretary of the Army (Operations and Research)
Director, Program Analysis and Evaluation
Chief, National Guard Bureau
Chief, Army Reserve
Commanding General, Training and Doctrine Command
Commanding General, Operational Test and Evaluation Command

Non-Voting Members as Required

Program Executive Office (if applicable)
Director, U.S. Army Cost and Economic Analysis Center
Office of the General Counsel
Office of the Judge Advocate General
Office of the Inspector General
U.S. Army Information Systems Software Center
Secretary of the Army for Financial Management and Controller-Business Resources Directorate
Deputy Chief of Staff for Personnel/Personnel Total Army Command-MANPRINT
Commanding General, Space and Missile Defense Command
Director, Small and Disadvantaged Utilization Office (SADBU)

4.0 Army IPT Structure

In an effort to optimize the acquisition process, DoD has implemented the Integrated Product and Process Development (IPPD) concept. The Army has incorporated the principles of IPPD into the ASARC/IT OIPT process. At the core of the IPPD methodology are the IPTs. The Secretary of Defense has directed that the Department perform as many acquisition functions as possible, including oversight and review, using IPTs. These IPTs function in a spirit of teamwork with participants empowered and authorized, to the maximum extent possible, to make commitments for the organization or the functional area they represent. The IPTs themselves, are composed of representatives from all appropriate functional disciplines and the PMO, working together to build successful programs. They enable decision-makers to make the right decisions at the right time. IPTs operate under the broad principles shown in Figure XXIV-1.

There are two IPT elements or levels supporting the PM throughout the ASARC/IT process: (1) the ASARC/IT OIPT, and (2) the various Working-level Integrated Product Teams (WIPT). The ASARC/IT OIPT, established to support each program, performs the day-to-day work required to support the program throughout the acquisition process, to include those activities leading to a successful milestone decision. Its members reflect each of the offices represented in Table XXIV-2, tailored to the specific requirements of the program. In addition, the various OSD level staff elements should be represented for ACAT ID programs. Probably the most critical task facing the DASC is establishing and managing the ASARC/IT OIPT in support of the milestone review. The ASARC/IT OIPT supports the PM in the review process and is further organized into Working-level Integrated Product Teams (WIPT) which are oriented toward one or more of the various acquisition functional areas. Figure XXIV-2 shows the review and Army IPT/OIPT oversight structure for ACAT ID, IC and II and ACAT IAM, IAC, and IIA programs.

INTEGRATED PRODUCT TEAM
OPERATING PRINCIPLES

- **Open Discussion with No Secrets**
- **Qualified, Empowered Team Members**
- **Consistent, Success-Oriented, Pro-Active Participation**
- **Continuous Communications Up and Down the Chain**
- **Reasoned Disagreement**
- **Issues Raised and Resolved Early**

Figure XXIV-1. IPT Operating Principles

4.1 ASARC/IT Integrated Product Team (IPT)

The ASARC/IT OIPT, established for a given program, is comprised of representatives of the principals for the offices shown in Table XXIV-2. Depending on whether the system or program falls within the purview of the DISC4, the responsible DASC may report to either the Vice Director, Information Systems for Command, Control, Communications, and Computers (VDISC4) or the Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA(ALT)) Deputy for Systems Management and Horizontal Technology Integration (HTI). Working-level ASARC/IT IPTs meet throughout the acquisition process, and becomes most active in support of those activities leading to a milestone decision.

In addition to providing support and oversight throughout the acquisition life-cycle of the program, the ASARC/IT IPT make recommendations on the structure of both the IPT and WIPTs needed to support the program, topics or issues that should be subject to future review, the appropriate decision authority for those reviews, and required documentation. In addition, the ASARC IPT may review ACAT ID programs and make recommendations for restructuring under OSDs Acquisition Streamlining process. Recommendations for "tailoring" a program will be presented to the AAE.

The ASARC/IT IPT is the level at which the majority of the interaction between the PMO and the DA Staff occurs. The ASARC/IT IPT is lead by the PM and, at the invitation of the PM, the DASC may serve as co-chair. In addition to key PM/PEO personnel, the ASARC/IT IPT includes representation from each of the principal staff offices and many supporting activities such as AMSAA, the Test and Evaluation Command (TECOM), the Communications and Electronics Command (CECOM), US Army Research Laboratory (ARL) Survivability/Lethality Analysis Directorate (SLAD), CEAC, etc., that are involved in the execution analysis and evaluation of the program. Although the ASARC/IT IPT provides support similar to the previously held Ad Hoc Working Groups (AHWG) during the milestone preparation process, the ASARC/IT IPT has more latitude than the AHWG and performs much of the work required to support the program throughout the acquisition process. Areas of support may include the development of program plans or strategies, assisting with identifying and resolving program issues, or recommend changes to the program and waivers to documentation requirements.

Table XXIV-2
ASARC/IT OIPT Membership

ASARC/IT OIPT Membership	
ASARC or IT OIPT	
Vice Director, Information Systems for Command, Control, Communications, and Computers (ACAT IA) Deputy for Systems Management and Horizontal Technology Integration (HTI) (ACAT IC & II)	
ASARC/IT OIPT Member Offices	
Assistant Secretary of the Army (Acquisition, Logistics and Technology)* Director, Information Systems for Command, Control, Communications, and Computers* Deputy Under Secretary of the Army (Operations Research)* Deputy Under Secretary of the Army (International Affairs) Training and Doctrine Command* Assistant Secretary of the Army (Financial Management)* Assistant Secretary of the Army (Installations and Environment)* Assistant Secretary of the Army (Manpower and Reserve Affairs)* Director, Program Analysis and Evaluation* Deputy Assistant Secretary of the Army (Acquisition, Logistics and Technology)/Procurement* Commander, Operational Test and Evaluation Command* Office of the General Counsel** Program Executive Officer/Program Management Office * U.S. Army Cost and Economic Analysis Center Deputy Chief of Staff for Operations and Plans* Deputy Chief of Staff for Logistics*	
Tailored ASARC/IT OIPT Member Offices	
Chief, Legislative Liaison Chief, National Guard Bureau* Chief, Army Reserve* Commanding General, Army Materiel Command Deputy Chief of Staff for Personnel Deputy Chief of Staff for Intelligence	Cdr, Information Systems Software Center** Dir, Information Systems Selection and Acquisition Agency** User Representatives** CG USA Information Systems Command** Office of the Inspector General**
Other Potential Members as Required	
The Surgeon General CG, Military Traffic Management Command CG, U.S. Army Space & Strategic Defense Command Cdr, U.S. Army Safety Center Chief of Public Affairs	Other Army Representatives** Army Digitization Office (ADO)** Chief of Engineers OSD Acquisition Staff Elements, etc. Acquisition Support Activities (AMSAA, TECOM, etc.)
Army Research Laboratory (ARL) Survivability/Lethality Analysis Directorate (SLAD) Director, Small and Disadvantaged Utilization Office (SADBU)	
Voting Member *, Non-Voting Member ** **Membership may change as needed.**	

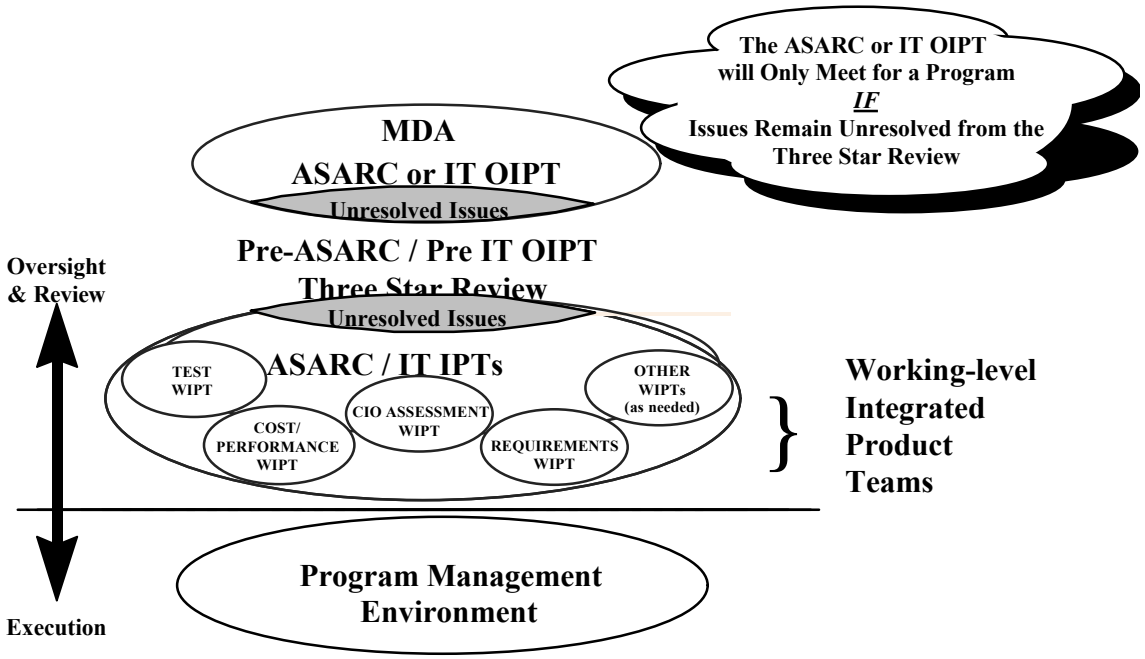


Figure XXIV-2. Army IPT Structure for ASARC/IT OIPT Reviews

Prior to the first meeting of the ASARC/IT OIPT, the PM will prepare ASARC/IT OIPT Operating Guidelines to be included with the ASARC/IT OIPT Announcement Letter. (See Section 8.7.1.) Sample Guidelines are provided in Figure XXIV-3, and examples of ASARC/IT OIPT Announcement Letters can be found on file with the ASARC/IT OIPT Executive Secretary. The PM, assisted by the DASC, should tailor these guidelines to fit the specific requirements of his program. Keeping these principles in mind, the primary function of the ASARC/IT OIPT prior to the milestone is to assist the PM in readying the program for the review. This support includes the review of program documentation, preparing assessments, and making recommendations on the readiness of the program to enter the next acquisition phase. The ASARC/IT OIPT members must be proactive in the process and participate early in the milestone preparation activities.

For instance, the review of documentation while still in an early draft form will enable early identification and resolution of issues by the PM and his staff. The ASARC/IT OIPT members must work closely with the PM, PMO, and among themselves to find acceptable solutions to problems as they are identified. Issues identified during the ASARC/IT OIPT review process, but not capable of resolution at that level, will be raised immediately to the appropriate decision authority as reflected in Figure XXIV-4, Issue Resolution Process. The PM has the option of coordinating a solution directly with the Principal Staff members or actually requesting a meeting with the MDA if the complexity of the issue warrants.

a. The ASARC/IT OIPT must focus on providing the MDA information to answer these questions:

1. Is the system still needed?
2. Does the system work?
3. Are major risks identified and manageable?
4. Is the program affordable (adequately funded)?
5. Has the system been subjected to Cost As an Independent Variable (CAIV) analysis?

b. Any issues that may prevent a positive answer to these questions must be resolved at the PMO/ASARC/IT OIPT level or elevated to the appropriate decision authority.

c. The ASARC/IT OIPT should identify issues early and resolve them as soon as possible.

d. The ASARC/IT OIPT publishes a Modified Integrated Program Summary (MIPS) with enclosed memorandums from the Deputy Chief of Staff for Intelligence (DCSINT); Deputy Chief of Staff for Operations (DCSOPS); Director, Program Analysis and Evaluation (PA&E); the Operational Test and Evaluation Command (OPTEC); the Army CIO; plus an ASARC/IT OIPT memorandum identifying any issues and/or risks which must be provided to the MDA in order to make the required milestone decision.

e. The MIPS is prepared with ASARC/IT OIPT support and input, but the PM maintains control of all portions of the MIPS except the required DA Staff memorandums.

f. The PM leads the ASARC/IT OIPT which in turn provides assistance to the PM. The authority to change the program and delay the review process remains with the PEO/PM and the MDA.

g. The ASARC/IT OIPT must maintain an integrated system perspective and avoid any tendency toward parochialism.

h. Absence from ASARC/IT OIPT meetings is permitted when the member has no issues to raise in his/her functional area.

i. Information exchange and data transmittal will replace as much report/documentation generation as possible. Substance and usability should replace format.

Figure XXIV-3. Sample ASARC/IT OIPT IPT Operating Guidelines

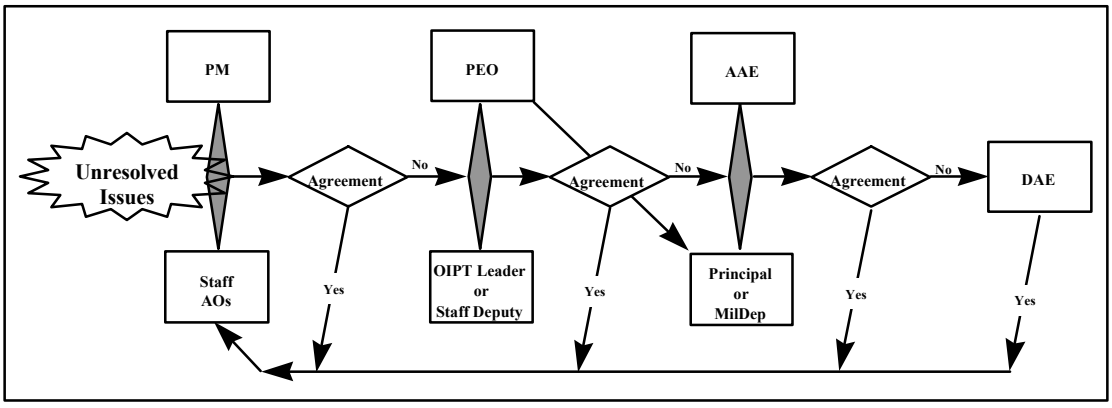


Figure XXIV-4. Issue Resolution Process

4.2 Working-level IPT (WIPT)

The ASARC/IT IPT is further organized into Working-level Integrated Product Teams (WIPT) which are oriented toward one or more of the various acquisition functional areas. The PM, in coordination with the ASARC/IT IPT members, proposes the WIPT structure that is best suited to support his specific program. Most ASARC/IT IPT members will participate on one or more of the functional teams. The PM should also assign a member of his office to each team. This PMO representative is usually the team leader or co-leader.

It should be noted that these Working-level Integrated Product Teams are not established just to manage or support the milestone process within the Pentagon prior to the ASARC/IT OIPT or DAB/OSD IT OIPT. They are normally engaged up front and continuously during the acquisition process to assist in the development of acquisition plans or strategies, test/performance evaluation strategies, logistics/fielding strategies, etc. that will increase the program's probability of success. These teams help the PM avoid the programmatic pitfalls while enhancing support from senior Army leadership.

Table XXIV-3 depicts the special interest areas of the Working-level Integrated Product Teams (WIPT) members. A typical WIPT makeup based on these special interest areas is shown in Table XXIV-4. The PM and ASARC/IT IPT members should ensure that these functional teams do not become “stove piped” in nature. As an example, the Test/Performance team should also include representatives from the Logistics, MANPRINT, and the Requirements teams. This is patterned after the organization that was recommended by the AAEs ASARC Process Action Team. WIPT responsibilities will correlate directly with the areas listed in Table XXIV-3.

Once the Working-level Integrated Product Team structure has been determined, a WIPT Leader (WIPTL) should be designated for each team. The WIPTL may be from the PMO or the DA Staff. Some PMs may prefer PMO representatives as leaders of the WIPTs for management purposes. Others may find it useful to have the WIPT led by a member of the ARSTAF to facilitate the resolution of issues within the Pentagon and reduce the need for PMO personnel presence away from the PMO. The WIPT leader or co-leader for the Cost/Funding/Operational Effectiveness will be the CEAC representative.

One of the primary responsibilities of each WIPT in preparation for the milestone is the reviewing, staffing and coordination of program documentation that falls within their respective functional area. As has been mentioned previously, it is important that this review begin early in the preparation process. Draft documentation should be reviewed and recommendations for changes and improvements provided as early as possible. Once the document is finalized, the WIPT member representing the proponent office will take the lead in the staffing and approval process.

Issues identified during the review of documentation, or at any time, will be resolved to the maximum extent possible within the WIPT functional area. If the issue requires consideration by other functional teams, the WIPTL can facilitate the coordination of issues across functional lines. This ensures that all members impacted by the issue are informed and involved. Likewise, the PMO representative on each WIPT must keep the PM aware of the actions within each group, so that the PMO can help resolve programmatic issues. As necessary, the WIPTL will brief the status of ongoing actions to the complete ASARC/IT IPT membership during each meeting. This keeps all members apprised of the issue(s) under consideration and affords them an opportunity to participate in the resolution process, when necessary.

Table XXIV-3
ASARC/IT OIPT Membership Interest Areas

Agency	Interest Area
AAE	Co-chair ASARC
VCSA	Co-chair ASARC
MILDEP	Chairs MILDEP Review
DUSA(OR)	TEMP, SER, AoA
DUSA(IA)	International/Cooperative Interest
ASA(IE)	Installations, Environmental
ASA(M&RA)	MANPRINT, MER
ASA(FM&C)	Funding, Approves ACP
GC	Acquisition Strategy, Legal
CLL	Congressional Status and Issues
SAAL-ZD	Risk Management, CAIV, APB, Vulnerability
SAAL-ZP	Procurement Strategy
HQ TRADOC	ORD/COIC, MER, AoA, MNS
TRADOC School/Center	Briefs ASARC(opt), STRAP, BOIP/QQPRI
TSM	Briefs MILDEP Review, ASARC(opt)
PEO	Briefs ASARC(opt)
PM	POE, CARD, MIPS, Briefs MILDEP Review, ASARC(opt)
HQ AMC	POE, CRLCMP, Production Readiness
DISC4	Chair IT OIPT, CIO Assessment, CRLCMP
VDISC4	MIPS, BAS, COMM Systems
SAAL-ZS	MIPS, Weapons Systems
DCSOPS	AoA, ORD/COIC, MNS, BOIP/QQPRI
DCSLOG	ILSP, Logistics, Supportability
DCSPER	MANPRINT
DCSINT	STAR, Threat Coordination
PAED	CCA, Affordability Assessment
SMDC	Space and Missile Defense
HQ OPTEC	System Evaluation Report (SER)
AMSAA	System Analysis and Logistics
TECOM	Technical Testing
CEA	.AoA, POE, ACP, CCA
OTSG/AEHA/CHPPM	Health
USASC	Safety
IG	Oversight
ARL/SLAD	Survivability/Lethality, Information Operations
ASARC/IT OIPT	
Executive Secretary	Administrative Support and Scheduling for ASARC/IT OIPT

Table XXIV-4
Typical ASARC/IT WIPT Structure

Members		Associate Members	
Program Management			
PEO/PM*/ASARC Coordinator		Support Contractor(s)	
DASC (ASARC IPT Facilitator)			
Test/Performance Analysis			
DUSA(OR)**	MANPRINT Rep	AMSAA	OSD Reps
DCSOPS	Logistics Rep	OPTEC	TECOM
ASA(ALT)	DISC4	PM*	DCSINT
ARL/SLAD			
Modeling and Simulation			
PM	RDEC	ASA(ALT)	TRADOC
AMC	DCSOPS		
Logistics			
DCSLOG**	OSD Rep	AMSAA	TSM
ASA(IE)	DISC4	MTMC	PM*
ASA(ALT)			
MANPRINT			
DCSPER**	OSD Rep	ARL/SLAD, HRED	TECOM
ASA(MRA)	Logistics Rep	Safety Center	CHPPM
TSM/School		PERSCOM (DCS Plans)	PM*
Requirements			
TRADOC**	JCS/JROC Rep	TRADOC TSM	PM*
DCSINT	PA&E	DISC4	DCSOPS
OSD Rep		FP	CAIG Rep
Cost/Funding/Operational Effectiveness			
DCSOPS**(co-chair)		CEAC (co-chair)	
PA&E	CAIG	ABO	ASA(ALT)
ASA(FM&C)	PM*	TRAC	DUSA-OR
HQ AMC	DISC4	TSM/School	
Risk Mitigation			
PM	AMSAA	SAALT	AMC
Contracting			
Contracting Office.	Engineering Rep	Logistics Rep	Testing Rep
Legal	SADBU	PM*	
Production Readiness			
AMC HQ**	MTMC	AMSAA	ACALA
DCSLOG		PM*	
Advisory/Issue Dependent (Members)			
OGC	DUSA(IA)	PM*	OCLL
TAAG	MTMC	SSDC	IEA
IG	COE	OCAR	Surgeon General
NGB			
CIO ASSESSMENT			
AMC	FP	DISC4	OSD Rep
PM	TRADOC	TSM	ADO
ASEO			

WIPT Leader (WIPTL)* PM may request to serve as WIPTL or co-WIPTL**

5.0 Duties/Responsibilities of the DASC

The program's DASC is the primary acquisition staff officer at HQDA. The DASC is responsible for the day-to-day support of his/her assigned program and serves as the PMs representative and primary Point of Contact (POC) within the Pentagon. Depending on whether the system or program falls within the purview of the DISC4, the responsible DASC may report to either the Vice Director, Information Systems for Command, Control, Communications, and Computers (VDISC4) or the Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA(ALT)), Deputy for Systems Management and HTI. The DASC is responsible for ensuring that all program review requirements are identified and communicated immediately to the PM. As the ASARC/IT OIPT Facilitator, the DASC assists the PM in the management of the ASARC/IT OIPT.

Figure XXIV-5 depicts the respective areas of responsibility of the DASC and the PM in the review process. The need for a comprehensive teamwork arrangement between the PM and DASC is evident. The PM must manage the efforts of the PMO to provide quality and timely program documentation and information to the Army Staff and supporting activities, while the DASC must ensure that the Army Staff Action Officers (SAO) work effectively in supporting the PMs efforts. The following paragraphs expand on the basic DASC responsibilities.

5.1 Key activities and responsibilities of the DASC

- Primary Acquisition Staff Action Officer—The DASC is responsible for keeping the acquisition chain of command (ASA(ALT) or DISC4) informed of the status of the program and the status of the review preparation activities. He represents and supports the program in acquisition staff meetings and, when needed, provides staff papers, etc. The DASC is also responsible for notifying and coordinating the attendance of ASA(ALT) or DISC4 managers at reviews, meetings or briefings.

- Primary PM POC at Pentagon—The DASC works closely with the PM to represent the program within the acquisition chain and to other staff activities. He assists the PM in issue resolution at DA and OSD levels. The DASC is the “eyes and ears” of the PM at the Pentagon and must ensure that the PM is advised of any actions or circumstances that might negatively impact the program.

- ASARC/IT OIPT Facilitator—As ASARC/IT OIPT Facilitator, the DASC assists the PM in the day-to-day management of ASARC/IT OIPT activities. The ASARC/IT OIPT Facilitator is responsible for ensuring that the ASARC/IT OIPT membership supports the PM in readying the program for review. The Facilitator is responsible for recording issues identified by ASARC/IT OIPT members and assisting/tracking the resolution process. As the ASARC/IT OIPT Facilitator, the DASC is the primary POC for keeping the PM advised of the review process status.

- Preparation of ASARC/IT OIPT Issues/Risk Memorandum—The DASC has primary responsibility for the preparation of the ASARC/IT OIPT Issues/Risk Memorandum and for ensuring the Validated Threat (DCSINT), Validated Need (DCSOPS), Operational Effectiveness/Suitability (OPTEC), Affordability (PA&E) Assessments, and CIO Assessment (DISC4) are prepared and included in the Modified Integrated Program Summary (MIPS). The central management focus of the PM and the DASC is to manage the ASARC/IT OIPT to a zero issues/low risk final ASARC/IT OIPT assessment. The DASC will brief the memorandum/findings at the Final ASARC/IT OIPT meeting and MILDEP Review and make changes as directed following these reviews. These documents are discussed in detail in Section 8.

- Event/Activity Scheduling—In coordination with the PM and the PMs ASARC/IT OIPT Coordinator, assists in scheduling ASARC/IT OIPT meetings and other review events in the Pentagon. Responsible for conference room reservations and setup for meetings, etc.

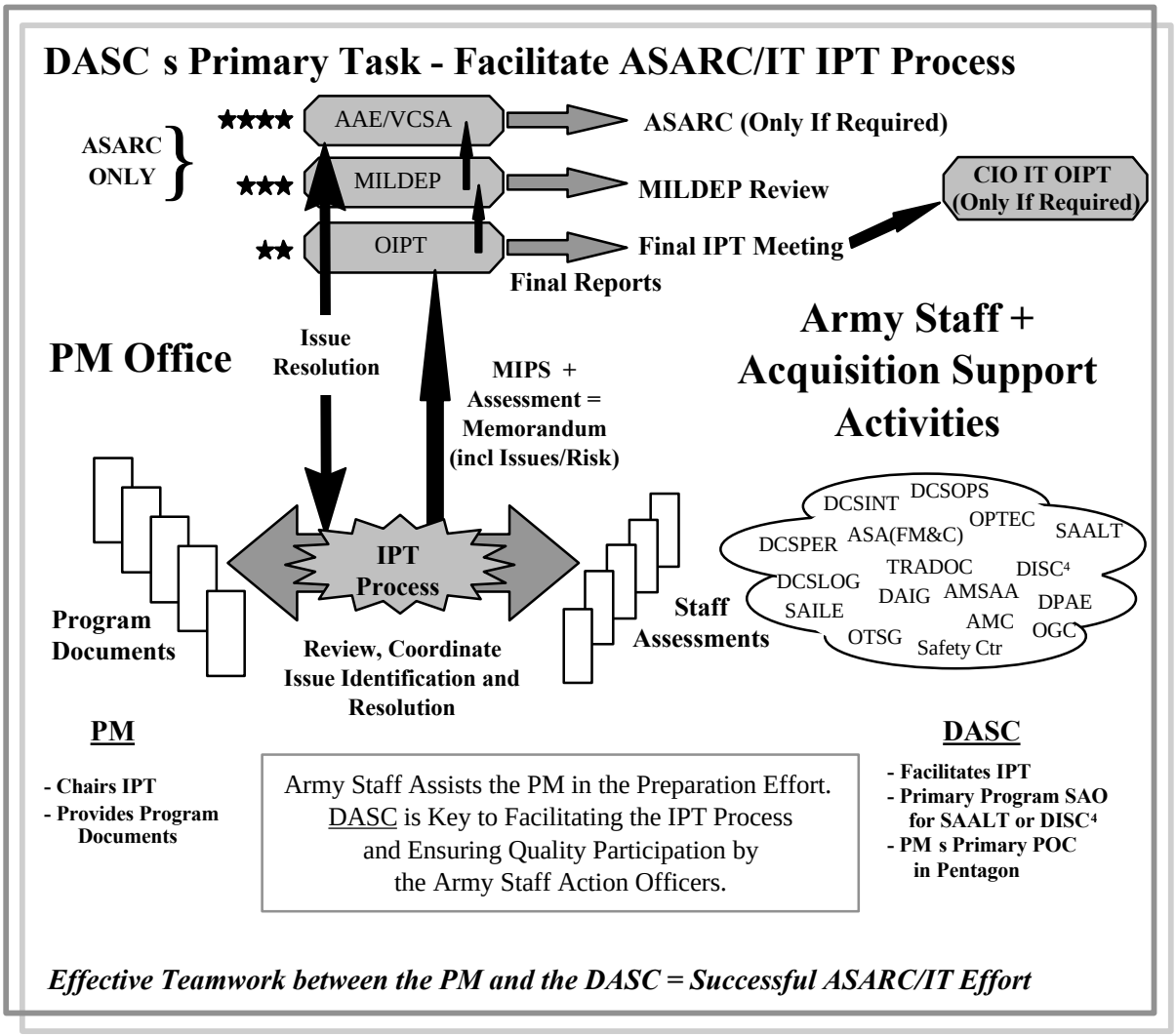


Figure XXIV-5. DASC/PM Coordination Role in the IPT Process

5.2 Other Key Coordination Roles

The DASC also works closely with the PMs ASARC/IT OIPT Coordinator, ASARC/IT OIPT Functional Area Leaders, and the ASARC/IT OIPT Executive Secretary, as described below:

- The PM should designate a member of the Program Management Office (PMO) to serve as the ASARC/IT OIPT Coordinator for the preparation activities and to maintain the status of these activities. The ASARC/IT OIPT Coordinator should advise the PM on the general status of the effort and be able to prepare or provide program status charts, such as a current schedule, documentation status report, etc. The ASARC/ IT OIPT Coordinator should maintain program schedule information, establish and maintain a program document library and an up-to-date documentation status log or register, establish and maintain a POC list, prepare ASARC/IT OIPT related correspondence, and act as the central POC at the PMO for all ASARC/IT OIPT members. The ASARC/IT OIPT Coordinator will be the PMs primary Action Officer (AO) for managing the preparation efforts and keeping the process on-track. The ASARC/IT OIPT Coordinator will work closely with the DASC/ASARC/IT OIPT Facilitator to ensure that the flow of information between the PMO and the ASARC/IT OIPT is managed effectively and that all meetings are well planned,

executed, and recorded. The DASC will maintain close coordination with the ASARC/IT OIPT Coordinator in order to schedule events and pass information. The DASC will coordinate with the PM on important matters and work routine matters with the ASARC/IT OIPT Coordinator.

- The DASC will coordinate the scheduling of the ASA(ALT) Military Deputy (MILDEP) and ASARC/IT OIPT Reviews and the recommended attendance at the ASARC/IT OIPT with the ASARC Executive Secretary. The DASC will also maintain communications with the ASARC/IT OIPT Executive Secretary in order to track changes in acquisition policy, procedures and obtain lessons learned from recent program reviews.

- As ASARC/IT OIPT Facilitator, the DASC will maintain close communications with the WIPT leaders to track review activities within each WIPT team. The Facilitator must monitor the working issues of the WIPTs to ensure that they are on a track for resolution. The Facilitator must be ready to elevate issues that threaten to delay the ASARC/IT OIPT process.

6.0 Cost Review Board Role and Responsibilities

The Army Cost Review Board (CRB) is responsible for the recommended Army Cost Position (ACP) which is the system life cycle cost estimate briefed for all ASARC, IT systems, and CAIG reviews for all major and special interest programs. The ACP is also the basis for the development and justification of the program's associated budget. The Assistant Secretary of the Army (Financial Management and Comptroller) (ASA(FM&C)) is the final approval authority for the Army Cost Position. The Cost Review Board is Chaired by the Principal Deputy ASA(FM&C) with members from the senior leadership of the Assistant Secretary of the Army (Acquisition, Logistics and Technology); the Office of Program Analysis and Evaluation; the Army Training and Doctrine Command; the Army Materiel Command and the Office of the Director of Information Systems for Command, Control, Communication and Computers. The Deputy for Cost Analysis to the ASA(FM&C) is the non-voting CRB secretary. The CRB Working Group (CRBWG) supports the CRB principals.

In the cost IPT, the CRBWG members are the principal's representatives on the IPT working to develop the system's life cycle cost estimate. These team members are responsible to keep their principals informed of the progress of the estimate and to pre-brief their principals before the CRB meeting.

In the rare circumstances where cost issues need further exploration or where the program has significant technical/cost/schedule risk, the CRB principals may require that additional analysis be completed before recommending the estimate for ASA(FM&C) approval. These additional analyses can range from a more extensive review of the cost drivers and alternative approaches—to developing a Component Cost Analysis (CCA) to be compared with the IPTs estimate. The involvement of the CRBWG would be appropriate to the level of required analysis.

Under the cost IPT process, the CRB process is tailored to meet the objective of assuring the senior leadership that the best system cost estimate is provided to the Army decision-makers.

The recommended ACP is briefed to the CRB principals, and when they concur, they send it to the ASA(FM&C) for approval. It then becomes the approved ACP and is briefed to the ASARC or DAB, and CAIG as appropriate. The diagram at Figure XXIV-6 illustrates the cost review and approval process.

7.0 Schedule of Events

Preparations for an ASARC/DAB and IT OIPT /OSD IT OIPT Review should be managed to a schedule established at the initial ASARC/IT OIPT Leadership meeting. Depending on the ACAT of the program being managed, there are two basic planning sequences; one for ACAT ID and another for ACAT IC and ACAT II programs. ACAT ID program review schedules are managed by OSD, and generally speaking, have more events and larger IPTs. Figure XXIV-7 depicts a typical ASARC/DAB preparation timeline for ACAT I and II programs.

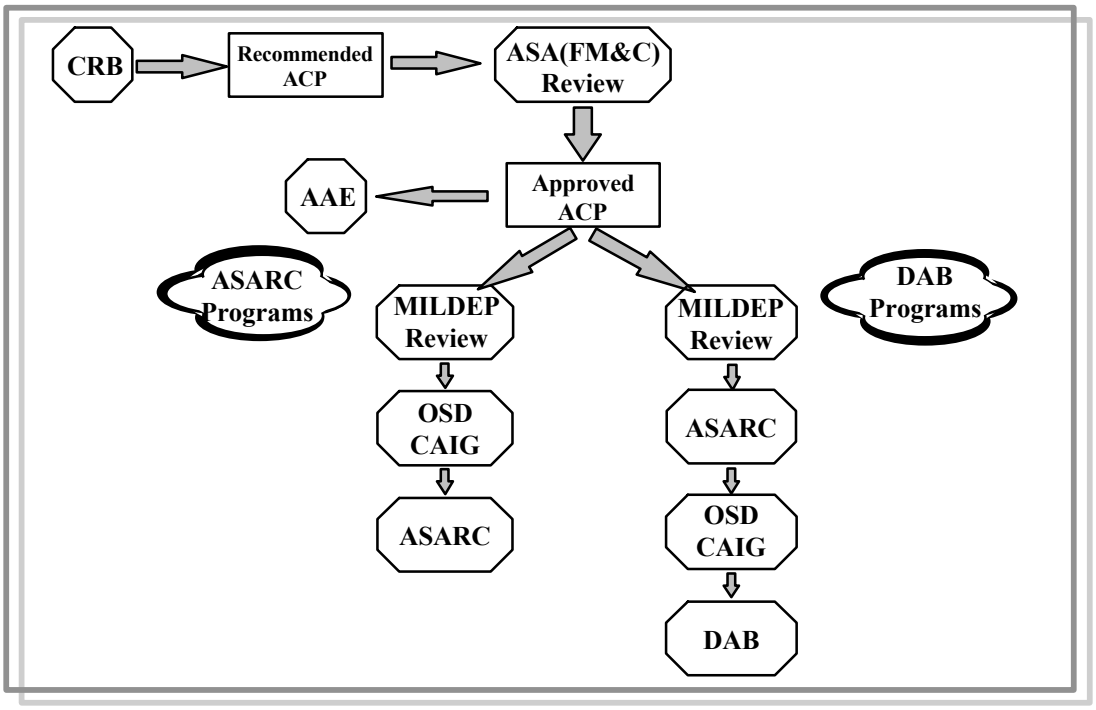


Figure XXIV-6. Cost Review and Approval Process Flow

7.1 ACAT IC and II Programs

The first step in preparing the schedule for ACAT IC and II programs is to set a target date for the ASARC. Once this has been established, the remaining major preparation milestones are backward planned—i.e., the MILDEP Review should be scheduled to occur approximately two weeks before the planned ASARC date, etc. ASARC IPT meetings should be proposed and scheduled at a rate of once a month. A sample review major events schedule for ACAT IC and II programs is shown in Table XXIV-5. The right column lists the number of days prior to the ASARC that an event should occur. The goal is to ensure that adequate time is allowed to enable all required actions to be completed on schedule. The item that is most critical is providing the draft ACP data to the CAIG. The ACP results from a CRB review and is the official cost document briefed to the CAIG for ACAT 1C and 1D systems. Typically this is on the critical path.

7.2 Typical Schedule for ACAT ID Programs

OSD and the OSD OIPT control ACAT ID preparation schedules. ASARC IPTs will still be formed for ACAT ID programs and merged within the Integrating Integrated Product Team (IIPT) structure. Their role is very similar to the ACAT IC and II processes, only now they must work closely with the OSD staff and the PMO. The ASARC IPT may meet as a separate entity from the IIPT in order to resolve an Army issue, or it may meet with selected OSD personnel. The PM may use the ASARC IPT to the extent he finds beneficial, but in any case, the ASARC IPT members retain the responsibility of keeping their principals well informed on issues affecting their functional area and ensuring their agreement with program review decisions.

One of the primary objectives of acquisition streamlining is to reduce the number of large meetings, including component reviews for ACAT ID programs. Once major events have been scheduled, target dates can be listed in a Calendar of Events and provided to the ASARC IPT membership as soon as possible. Table XXIV-6 depicts a sample review major events schedule for an ACAT ID program.

Milestone Review Support
Typical ASARC/DAB Preparation Timeline

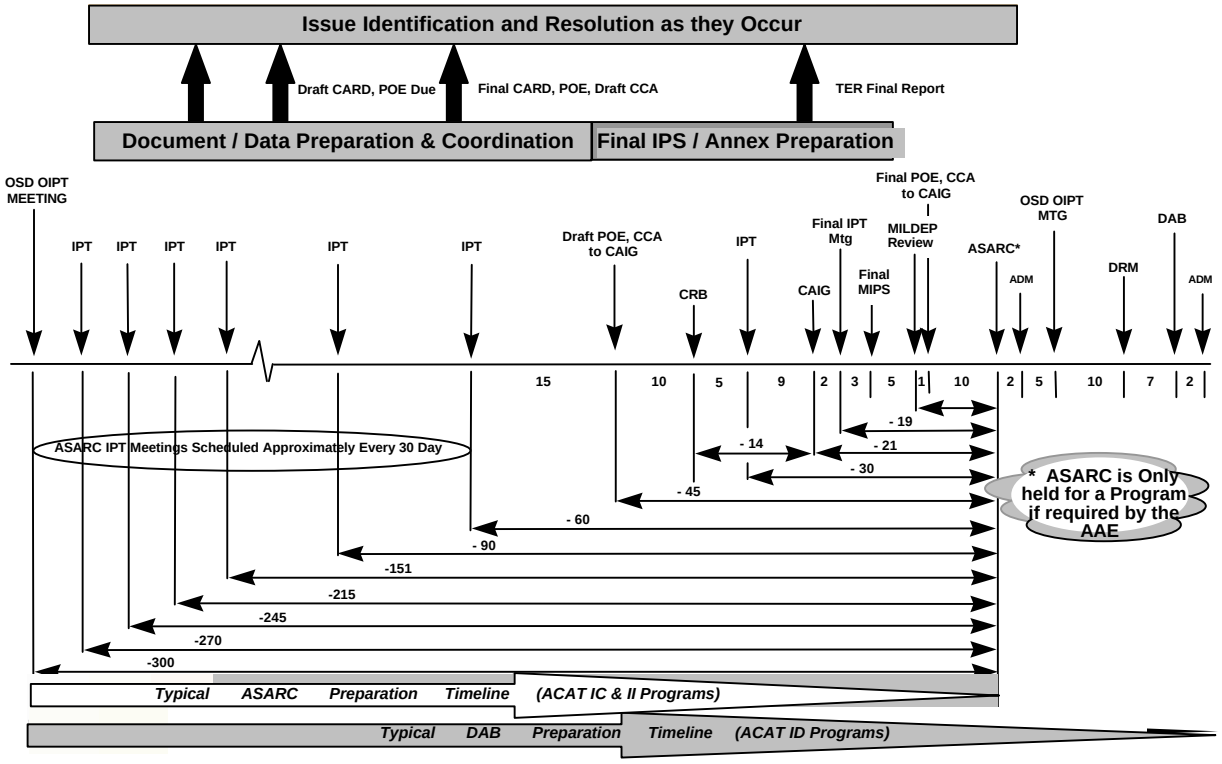


Figure XXIV-7. Typical ASARC/DAB Preparation Timeline

Table XXIV-5
Sample Review Major Events Schedule for ACAT IC and II Systems

Event	Schedule Remarks	Days Prior
ASARC IPT Kickoff Meeting	~ 9-12 months prior to ASARC	-300
ASARC IPT Meeting	as required	-270
ASARC IPT Meeting	as required	-240
ASARC IPT Meeting	as required	-210
ASARC IPT Meeting	as required	-180
ASARC IPT Meeting	as required	-150
ASARC IPT Meeting	as required	-120
ASARC IPT Meeting	as required	-90
ASARC IPT Meeting	as required	-60
Draft ACP data to CAIG*	45 prior to ASARC	-45
ASARC IPT Meeting	as required	-28
CAIG Meeting*	21 days prior to ASARC	-21
Final ASARC IPT Meeting	~ 5 days prior to MILDEP Review	-19
CRB Meeting	~ 14 days prior to ASARC	-14
MILDEP Review	~ 14 days prior to ASARC	-14
Final ACP to CAIG*	at least 10 days prior to ASARC	-10
JROC (Joint or multi-Service IC)	Prior to ASARC	-7
ASARC Review		0
* ACAT IC programs only		

Table XXIV-6
Sample Review Major Events Schedule for ACAT ID Programs

Event	Schedule Remarks	Days Prior
OSD OIPT Meeting	~ 9-12 months prior to DAB	-300
IIPT/ASARC IPT Meeting	as required	-240
IIPT/ASARC IPT Meeting	as required	-210
IIPT/ASARC IPT Meeting	as required	-180
IIPT/ASARC IPT Meeting	as required	-150
IIPT/ASARC IPT Meeting	as required	-120
IIPT/ASARC IPT Meeting	as required	-90
Draft ACP data to CAIG	at least 45 prior to OIPT	-62
IPT/ASARC IPT Meeting	as required	-60
CRB Meeting	at least 14 days prior to CAIG Meeting	-52
CAIG Meeting	at least 21 days prior to OIPT Meeting	-38
Final ASARC IPT Meeting	~ 4 days prior to MILDEP Review	-33
MILDEP Review*	~ 5 days prior to ASARC Review	-29
Final POE/CCA to CAIG	10 days prior to OSD OIPT Meeting	-27
ASARC Review*	~ 1 week prior to OIPT Meeting.	-24
JROC Review	Prior to DAB (no link to other events)	-20
OSD OIPT Meeting	~ 10 days before DRM	-17
DAB Readiness Meeting (DRM)	~ 7 days before the DAB	-7
DAB Review		0
* for ACAT ID, only if required by AAE		

7.3 Typical Schedule for IT Systems

Preparation for an IT OIPT / OSD IT OIPT Review should be managed to a schedule established at the initial IT OIPT meeting. The first step in preparing the schedule for IT OIPT programs is to set a target date for

the IT OIPT. Once this has been established, the remaining major preparation milestones are planned backward. IT OIPT meetings should be proposed and scheduled at a rate of once a month.

8.0 Documentation

Documentation, whether prepared and provided by the PM and TRADOC or the assessments and reports prepared by acquisition support activities, has been the primary source of information for acquisition decision makers and their staff at the DA and OSD level. Under the IPPD process, documentation is still very important, but the increased interaction between the PM and DA/OSD staffs and activities provides increased and diverse information/data exchange opportunities. It also lessens the need for much of the formal, detailed documents previously required. This section discusses the major categories of review and oversight documentation and outlines DoD and Army initiatives to apply effective streamlining to the documentation process.

Figure XXIV-8 provides an overview of required documentation, along with suggestions where tailoring opportunities exist and identifies those areas where tailoring is not necessary. For instance, statutory documentation or those documents requiring approval by the MDA, are normally non-negotiable and must be prepared in a prescribed format. Other review and oversight documentation can be negotiated by the PM with the ASARC/IT OIPT or OSD OIPT as to need and/or format. Examples of these are the program management documents used by the PM to manage his program. They are approved at the PM or PEO level, and are not subject to approval at the Army or OSD level. However, the document or information contained in the document may be provided to the IIPT/ASARC/IT OIPT members if that is the PMs preferred method of coordinating program information/data.

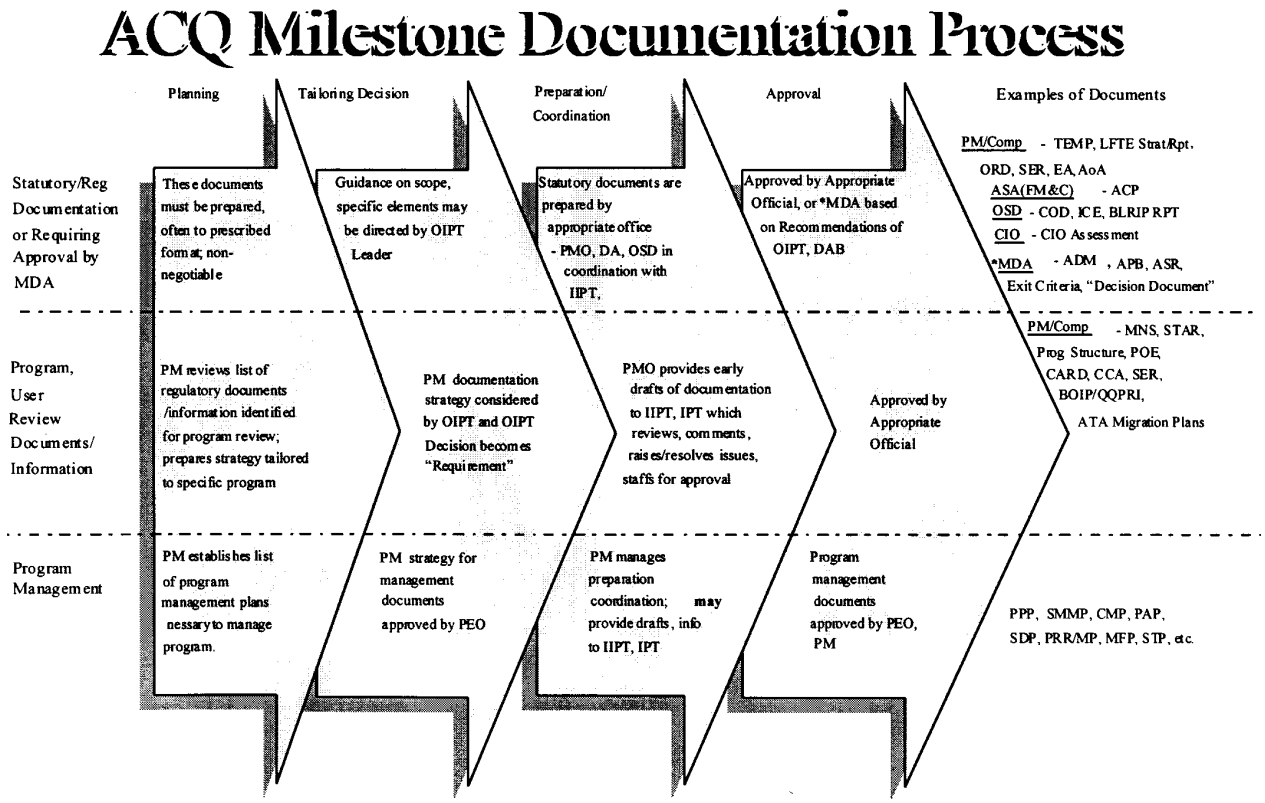


Figure XXIV-8. Acquisition Milestone Documentation Process

The ASARC PAT identified categories of documents and classified them by purpose and use in the review process. The categories include Oversight, Supporting, Congressional/DAB Oversight and Program Specific. The categories of Supporting and Program Specific documents present the best opportunities for documentation tailoring. The following paragraphs provide further detail on documentation tailoring and the various types of documents.

8.1 Documentation Tailoring

The AAE Memorandum of 27 July 1995, Subj.: Proponent Review of Army Oversight and Review Documentation established that the Modified Integrated Program Summary (MIPS) (Section 8.6) is the single document provided to the ASARC Principals for Milestone and Program Reviews. For milestone and program reviews also, only the MIPS will be provided for the IT OIPT Principals. Functional elements are to review support and program specific documentation generated within their functional area to find more efficiencies, and should limit oversight documentation to those needed to answer review and oversight questions. Therefore, one of the first activities of the ASARC/IT OIPT is to determine the requirement for program documents and information and recommend to the MILDEP/Army CIO what documentation should be prepared/tailored for the specific program. It is the responsibility of each WIPT to review program documentation within their functional area and provide tailoring recommendations to the ASARC/IT OIPT.

As an example, Figure XXIV-9 depicts the relationship of various cost and risk documents falling into the three categories of supporting, oversight and review documents. Similar relationships could be presented for T&E, logistics, MANPRINT, etc., documents. Even though statute or regulation may require a document, it may not be required by the ASARC/IT OIPT in general to perform its oversight function because another document may contain the same or better information. A major function of the ASARC/IT OIPT is to apply tailoring to the maximum extent possible without undue risk to the oversight/decision process. This tailoring of required oversight and review documentation to the needs of each specific program is a key element of the Acquisition Streamlining process. Continued emphasis will be placed on this effort to reduce the amount of documentation that must be prepared to support program reviews.

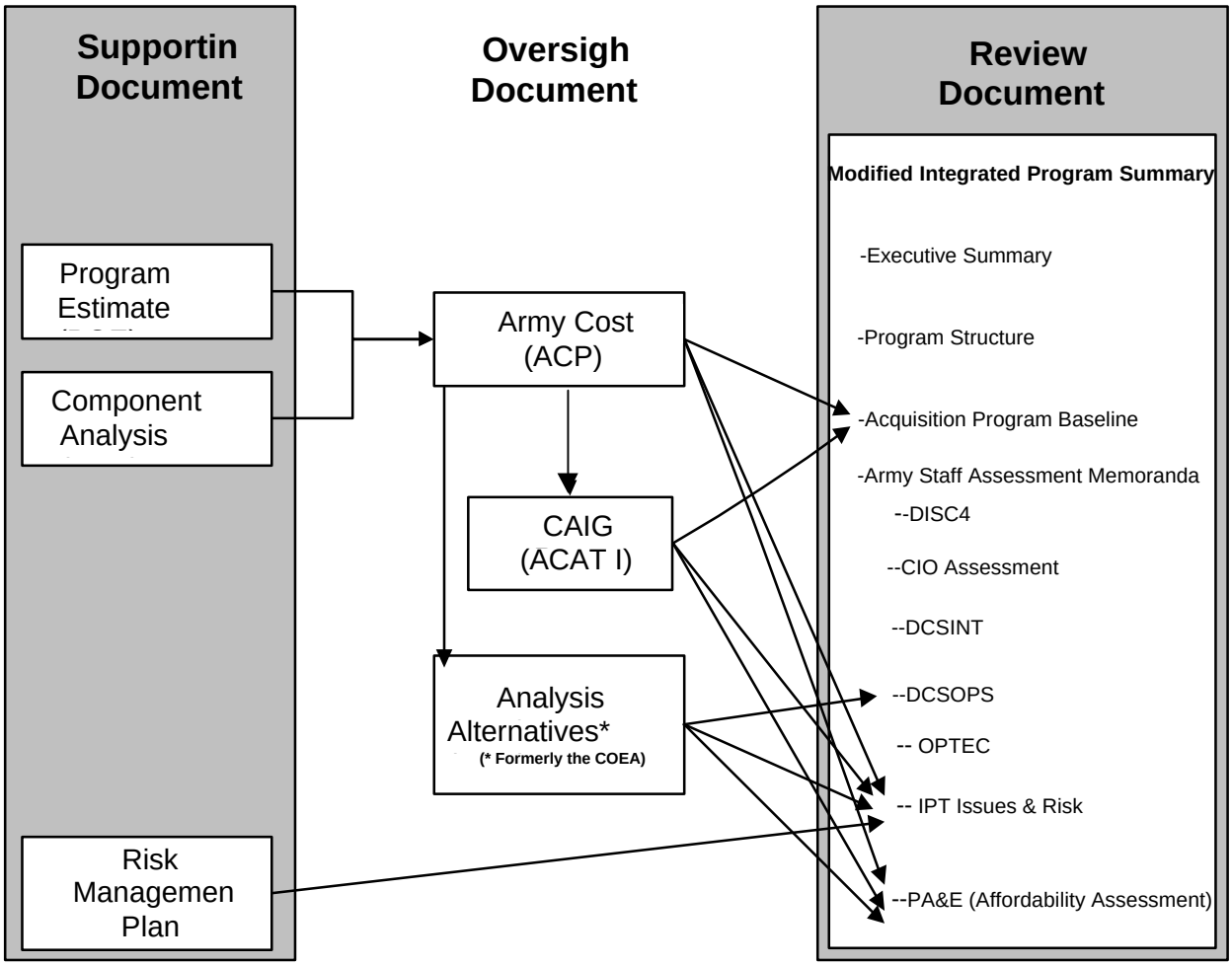


Figure XXIV-9. Typical Categorical Relationships of Program Documentation

8.2 Oversight Documents

Oversight Documents are those necessary to satisfy very explicit requirements in either Army, OSD or Congressional interest areas. Examples of the Oversight Documents normally required are shown in Table XXIV-7a. These are key documents that should be provided or made available, to all members of the ASARC/IT OIPT/OIPT. They are the best sources for the information needed for program assessments and recommendations.

8.3 Supporting Documents

Supporting documents are those used by ASARC/IT OIPT members to prepare/generate oversight and review documents. They are normally required for use by a WIPT and not the ASARC/IT OIPT/IIPT in general. The document or specific information content should be made generally available to any member or WIPT to assist in the resolution of an identified issue.

A supporting document change signed by the AAE on 30 Jan 1996, directs that all migration plans which identify program cost, schedule and performance impacts will comply with the Joint Technical Architecture—Army (JTA-A) and will be submitted to the Army Digitization Office (ADO). An ADO review will determine architectural compliance, evaluate conformance to interoperability objectives and use of proper engineering principles in determining schedule and performance impacts. Table XXIV-7b provides examples of supporting documents.

8.4 Congressional/DAB/OSD IT OIPT Oversight Documents

Congressional/DAB/OSD IT OIPT Oversight Documents are those required by statute or DoD regulation. Statutory documents cannot be waived by any DoD entity; however those required by DoD regulation may be waived. Table XXIV-7c provides examples of Congressional/DAB Oversight Documents. Requirement for these documents does not necessarily extend to all ACAT I and II programs. As an example, the CAIG report applies only to ACAT I programs and the DAB "Decision Document" applies only to ACAT ID programs.

Table XXIV-7a
Examples of Oversight Documents

Document	Remarks
Acquisition Program Baseline (APB)	Critical document at all ASARCs
Acquisition Decision Memorandum (ADM)	Must address APB status if not yet approved
Army Cost Position (ACP)	CRB results briefed to CAIG
Acquisition Strategy Report (ASR)	Includes Modeling & Simulation
Test & Evaluation Master Plan (TEMP)	Statutory; includes Critical Operation Issues and Criteria (COICs)
Analysis of Alternatives (AoA)	Includes training analyses (CTEA)
Operational Requirements Document (ORD)*	
Mission Need Statement (MNS)*	
Integrated Logistics Support Assessment (ILSA)	
System Evaluation Report (SER)	Statutory; Early Operational Assessment (MS II)
Live Fire Test & Evaluation Strategy Report	
Manpower, and Personnel Integration (MANPRINT) Assessment	Statutory (or Waiver)
Production Readiness Review (PRR) Report	
Risk Management Plan/Risk Assessment	
CIO Assessment	Statutory; Prepared by the Army CIO

* CDR TRADOC must approve all requirements; DA staff cannot change or modify without CDR TRADOC approval.

Table XXIV-7b
Examples of Supporting Documents

Document	Remarks
Program Office Estimate (POE)	Costing by Program Office
Component Cost Analysis (CCA)	Independent CEAC cost estimate
Cost Analysis Requirements Document (CARD)	System description to support cost estimates
Basis of Issue Plan/Feeder Data (BOIP/FD)	Army Management document
Qualitative & Quantitative Personnel Requirements Information (QQPRI)	Army Management document
RAM Rationale Report	
Health & Safety Data Sheets	
Human Factors Engineering Assessment (HFEA)	Feeds MANPRINT Assessment
Test Threat Support Package	Part of TEMP Process
Transportation Report	
Environmental Assessment/Impact Statement	
System Training Plan	User management plan
Insensitive Munitions/Unplanned Stimuli Strategy & Assessment	Supports ORD, Technical Assessment, Risk Assessments, SER
Safety Release	
Safety Assessment Report	Feeds MANPRINT Assessment, Safety Release
Health Hazard Assessment Report	Feeds MANPRINT Assessment
Manpower, Personnel & Training Assessment	Feeds MANPRINT Assessment
Survivability/Lethality Assessment	Feeds MANPRINT Assessment
Work Breakdown Structure (WBS)	Basic for cost estimates/contracts
Materiel Fielding Plan	
Communications Plan	
AIS Security Plan	
JTA-A Migration Plans	Must be coordinated with the ADO
Programmatic Environmental, Safety, and Health Evaluation (PESHE)	
Other Plans—IEPs, CMP, ILSP, SMMP/HISP(OSD), SSP, CRLCMP, SSEP, etc.	

Table XXIV-7c. Examples of Congressional/DAB Oversight Documents (Statutory, Regulatory)	
Document	**Remarks**
CAIG Report (ICE)	- ACAT I systems only
Acquisition Plan	
Beyond LRIP Report	- DOTE document for MS III
Business Clearance	- OSD document
Contractor Cost Data Reporting	- OSD support document
Manpower Estimate	- May be combined with other assessments or as a stand alone report—Statutory
Selected Acquisition Report (SAR) (& Exception)	- Statutory
Unit Cost Report (& Exception)	- Statutory
Cooperative R&D Projects Report	- Prepared by OSD for ACAT ID
JROC Assessment	- DAB
Acquisition Program Baseline	
Exit Criteria	- Will be attached to the ADM
OIPT Leader' Report	- Presented at DRM, DAB (with Decision Document, replaces DAB Blue Book)
Environmental Assessment/Impact Statement	- Statutory
CIO Assessment	- Statutory; Prepared by Army CIO
Summary OT&E Report	- OSD

Table XXIV-7d Examples of Program Specific Documents (Not Required by Every Program)	
Document	**Remarks**
Comparative Sources Analysis	- contract
Program Protection Plan	- PM management documents
Security Classification Guide	- PM management documents
Program Assurance Plan	- PM management documents
Software Development Plan	- PM management documents

Table XXIV-7e Included in Other Documents
COIC is included in TEMP Affordability Assessment is included in Modified IPS Environmental Assessment is included in Modified IPS Integrated Program Assessment is included in Modified IPS Cooperative Opportunities is included in Modified IPS

8.5 Program Specific Documents

Documents in this category are those which apply only too specific programs. As examples, the Security Classification Guide applies only to programs that have classified components, and the Software Development Plan applies only to those programs that have software components. Table XXIV-7d lists examples of Program Specific Documents. The responsibility of the ASARC/IT OIPT for this category is to ensure that, if required, they are satisfactorily accomplished. However, no formal staffing at DA or OSD is necessary for these documents.

8.6 Other Documents

Some documents, heretofore treated as standalone documents, are now included in other documents. These are listed in Table XXIV-7e.

8.7 Key Documents

Of the many documents involved in the review and oversight process, there are a number that are key to the PMs management of the ASARC/IT OIPT and the preparation process. The first is the ASARC/IT OIPT

Announcement Letter which needs to be timely and effective in order to get the ASARC/IT OIPT organized and operational at the outset. The MIPS is the most critical, because it is the comprehensive statement of the program status that is used by the ASARC/IT OIPT to make their review decision. It is the ultimate product of the ASARC/IT OIPT process and reflects the work accomplished by all involved in the process. The Acquisition Program Baseline (APB), an annex to the MIPS, is key because it contains the critical schedule, performance, and cost parameters approved by the IPT/OIPT which are deemed necessary to ensure the program is postured to succeed. The ADM is, of course, also important because it provides the approval to proceed to the next acquisition phase and any special guidance for the Program Manager. If, when the ADM is signed, the APB is still not approved, the disposition of the APB must be addressed in the ADM and provide a window when the APB is expected to be approved.

8.7.1 ASARC/IT OIPT Announcement Letter

This letter notifies the acquisition community of the formation of the ASARC/IT OIPT for a specific program. It must be prepared and distributed in a timely manner, and it is imperative that all ASARC/IT OIPT members receive a copy. The letter is prepared by the ASARC/IT OIPT Coordinator in coordination with the ASARC/IT OIPT Facilitator and the ASARC/IT OIPT Executive Secretary. The ASARC/IT OIPT Announcement Letter, including the proposed ASARC/IT OIPT Operating Guidelines document, should be approved and signed by the Vice Director, Information Systems for Command, Control, Communications, and Computers (VDISC4) or the Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA(ALT)), Deputy for Systems Management and HTI. It should also include meeting time, location, agenda, and any other useful program/process information that is available.

The ASARC/IT OIPT Announcement Letter should be distributed to all commands, agencies, and staff activities that are represented on the ASARC/IT OIPT or have specific acquisition responsibilities. This distribution list will be coordinated with the ASARC/IT OIPT Executive Secretary and should go out at least three weeks before the initial ASARC/IT OIPT meeting.

8.7.2 Modified Integrated Program Summary (MIPS)

This is the only document used for review by the ASARC/IT OIPT. For this reason it is important that it contain all the information necessary for the ASARC/IT OIPT to make a decision. The intent of the MIPS is to provide the decision-maker with a single document that contains only the essential information necessary to make the decision. This eliminates the need for separate, standalone documents that cause unnecessary duplication of effort.

The MIPS must answer five key questions:

- Is the system still needed?
- Does the system work (from the standpoints of the user, functional staffs and the PM)?
- Are major risks identified and manageable?
- Is the program affordable (adequately funded)?
- Has the system been subjected to CAIV analysis?

The PM maintains primary responsibility for the production and content of the MIPS, except for the Assessment Memoranda. The MIPS is coordinated with the ASARC/IT OIPT membership to elicit comments and input at the earliest possible opportunity. The PM prepared portion of the MIPS is similar to that of the earlier IPS, but the format is less rigid and structured to permit the PM to address the important issues associated with his program.

The Assessment Memoranda are prepared by the DA staff and associated activities to address specific points. The Validated Threat Memorandum, prepared by the ODCSINT, certifies that the Threat Assessment supporting the system requirements is still valid. The Validated Need Memorandum, prepared by ODCSOPS (by ODISC4 for IT programs), certifies that the system requirements are based on valid MNS and/or ORD documents. The Operational Effectiveness/Suitability Memorandum, prepared by OPTEC, certifies that all required testing has been completed and evaluated and the system has been found to be operationally effective, survivable, and suitable. The Army CIO prepares the CIO Assessment to certify that the program satisfies statutory and regulatory requirements. PA&E prepares the Affordability Assessment that is briefed at the ASARC/MAISRC. Finally, the Issues and Risk Memorandum is a corporate memorandum prepared by the ASARC/IT OIPT under the coordinating supervision of the ASARC/IT OIPT Facilitator. A copy of each of these Assessments is included in the MIPS.

As the only document for review by the ASARC/IT OIPT Principals, its importance cannot be overstated. However, the MIPS is not a detailed document; it is an executive summary of the program and the issues. As

such, no one format fits all programs. The ASARC/IT OIPT Streamlining Process Action Team (PAT), in their final report to the AAE/Army CIO, provided a general format that followed the recommendations of the OSD Oversight and Review PAT.

The general format for a MIPS is:

Executive Summary

1. Program Execution Status
2. Alternatives Assessed and Results
3. Cost and Funding Status
4. Threat Highlights/Existing System Shortfalls
5. Acquisition Strategy
6. Risk Assessment and Plans to Reduce Risk
7. Program Environmental Analysis
8. Cooperative Opportunities
9. JTA-A Migration Plan

Annex A- Program Structure

Annex B- Acquisition Program Baseline

Annex C- Assessment Memorandums

- DCSINT: Validated Threat
- DCSOPS/DISC4: Validated Need
- OPTEC: Operational Effectiveness/Suitability/Survivability
- ASARC IPT: Issues/Risk
- PA&E: Affordability (include total funding)
- Army CIO: CIO Assessment

Special mention is required for the Issues/Risk memorandum. It is a key document within the MIPS because it identifies all issues that have not been resolved within the ASARC/IT OIPT process that will require MILDEP or AAE resolution. The memorandum provides recommended solutions, if applicable, and the risks to the program associated with the issues identified. This memorandum is of crucial importance to the PM, because although the objective of the ASARC/IT OIPT process is to have no outstanding program issues going into the program review, this is not always the case. Therefore, this validates the need for the PM and DASC to keep records of all issues that have been identified and closely manage the actions required to resolve remaining issues.

Distribution of the MIPS should be coordinated with the ASARC/IT OIPT Executive Secretary. ASARC/IT OIPT members should be provided a copy for use in preparing their principal prior to the ASARC/IT OIPT. The copy should be provided in sufficient time for the ASARC/IT OIPT member to use in briefing their chain of supervision.

8.7.3 OSD Decision Document

For ACAT ID and ACAT IAM programs, the PM must propose a scope and format for a decision document that will be approved by the ASARC/IT MDA and provided to the OSD OIPT. Generally, it will include an executive summary document similar to the IPS/MIPS without the Assessment Memorandum Annexes. It includes as attachments, the statutory and regulatory documents that must be approved and signed by the DAE. The PM must coordinate closely with the OSD Co-Chair of the IIPT to develop a suitable format.

Some general guidelines from DoD 5000.2-R to consider in constructing the document:

- "Ensuring that the necessary information is produced and distributed to decision-makers is much more important than the format."
- "Department's policy to "tailor-in" (i.e., include program information for the decision-maker considering risk, values, etc. of the specific program) program information on a case-by-case basis as program circumstances dictate."
- "PMs are not required to submit mandatory information.....as stand-alone documents."
- "At the discretion of the PM, required information may be combined into a single document to the extent practicable."

A possible decision document structure is depicted in Figure XXIV-10.

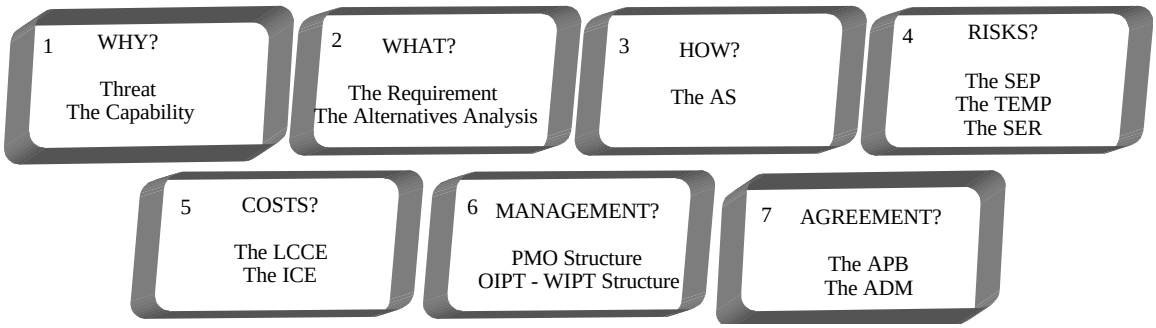


Figure XXIV-10. Notional DAB/OSD IT OIPT Decision Document

8.7.4 Acquisition Decision Memorandum (ADM)

The ADM is a memorandum signed by the Milestone Decision Authority (MDA) and documents the acquisition decisions made by the ASARC/IT OIPT or DAB/OSD IT OIPT. It also establishes the Exit Criteria that must be demonstrated by the next milestone in order for the program to move to the next acquisition phase. The ADM is written by the ASARC/IT OIPT Executive Secretary and signed by the appropriate MDA. There is no prescribed format for the document, but it should include the Exit Criteria applicable to the next milestone review, the APB, and any other specific guidance directed by the ASARC/IT OIPT MDA such as delegation of the decision authority to the PEO (other than ACAT I) on specific matters, etc. (See Annex A for example Exit Criteria.) The ADM is distributed to the offices of the ASARC/IT OIPT/DAB/OSD IT OIPT principals, the PEO/PM, and any other office directed by the MDA.

9.0 Review Meetings

There are two types of ASARC reviews, the Milestone Decision Review (MDR) and the Program Review (PR). There are also two types of IT reviews, the MDR and the IPR. The ASARC/IT OIPTs will support the PM in preparation for both types of review. Preparations for the MDR are normally more complex than a PR (not associated with a DAB program). The OIPT/ASARC/IT OIPT should be engaged in both to the extent necessary to answer all questions pertinent to the decision required. Responsibilities of the ASARC/IT OIPT include:

- *The review of all required documentation and assisting the PM in attaining approved documents. Early drafts of program documents should be provided to the appropriate WIPT teams/members to start the review process early. The ASARC/IT OIPT members should make constructive comments and suggestions as early as possible in the process to minimize effort expended on revisions.

- The ASARC/IT OIPT members will identify issues to the PM and ASARC/IT OIPT Facilitator in a timely manner and support issue resolution through the WIPTs and ASARC/IT OIPT process to the maximum extent possible. Early identification and resolution of issues is the key to keeping the review process on schedule.

- The designated staff and acquisition activities will complete required assessments in a timely manner to support the consolidation of issues and risk findings into the Issues/Risk Memorandum of the MIPS. Required assessments are identified and discussed in Section 8.7.2.

- The ASARC/IT OIPT members are responsible for keeping their leadership fully informed on the progress of the review process and are responsible for pre-briefing their principals before the Final ASARC/IT OIPT meeting, the MILDEP Review, and the ASARC/IT OIPT. Current policy is to limit attendance at these meetings to those Principals with issues requiring resolution at the particular meeting/review in question. Each member is responsible for recommending to the PM and ASARC/IT OIPT Facilitator whether or not their principal needs to attend a meeting. The PM will be available to pre-brief/discuss issues with principals if the ASARC/IT OIPT representatives determine that this is necessary.

Following the preparation phase and the final ASARC IPT meeting, for ACAT IC and II programs, there will be the MILDEP Review, then the ASARC, if required. For ACAT ID programs, the MILDEP Review, the

OSD OIPT Meeting, a DAB Readiness Meeting, then the DAB, will follow the Final ASARC IPT Meeting. No ASARC Review will be held for ACAT ID programs except under exceptional circumstances. These meetings will occur with little time to effect major changes in the program so it is important that the best possible effort be made during the preparation phase to leave nothing to chance. Every issue, no matter how small, needs to be dealt with completely to the satisfaction of all ASARC IPT members.

9.1 Final ASARC/IT OIPT Meeting

The VDISC4 or the ASA(ALT) Deputy for Systems Management and HTI chairs the Final ASARC/IT OIPT meeting. The purpose of the meeting is to determine if the program is ready to proceed to the MILDEP Review, and to review the MIPS and the ASARC/IT OIPT Briefing. The goal of this final IPT meeting is to ensure that there are no open issues and no non-concurrences going into the MILDEP review. If this is not the case, the ASARC/IT OIPT will identify any remaining issues that require guidance or resolution at the MILDEP review.

Attendance—The Final ASARC/IT OIPT meeting will normally be attended by the PEO, PM, all ASARC/IT OIPT members, and any staff principals that might be involved in issue discussion and resolution. ASARC/IT OIPT members will determine if their staff principal should attend and advise the PM and DASC accordingly. This should only be necessary if the office has an unresolved issue to be briefed and the principal's representation is needed to discuss and resolve the open issue. If the staff principal does not attend, the ASARC/IT OIPT member should be prepared to confirm the principal's concurrence with the contents of the MIPS.

Agenda—The typical agenda should include a run-through of the proposed briefing slides by the briefer. Where there are issues that require a staff principal to attend, more time may be allocated to the discussion period. Briefers should present only the information required to support the decisions requested. It is important that all remaining issues are accorded a fair hearing and every effort made to reach resolution prior to the MILDEP Review. A typical Agenda is provided in Table XXIV-8.

Table XXIV-8
Typical Final ASARC/IT OIPT Meeting Agenda

Item	Presenter	Time
Introduction	PEO	5 min
User Briefing	TSM/FP	10 min
Developer Briefing	PM	20 min
Operational Effectiveness	OPTEC	10 min
CIO Assessment	ODISC4	10 min
Affordability	PAED	10 min
ASARC/IT OIPT	Memo/DASC	10 min
Discussion	All	10 min
Summary of Decision	Chairman	5 min
	Total	90 min

Preparations—It is the responsibility of the PM and the DASC to make arrangements for the meeting to include selecting the date, reserving a room and notifying attendees. It should be held 4-5 days before the scheduled brief to the MILDEP. The SAAL, DISC4, and ASARC briefing rooms are all adequate for this purpose.

Outcomes—It is important to make every effort to conclude this meeting with no unresolved issues. It is the responsibility of the VDISC4 or the ASA(ALT) Deputy for Systems Management and HTI to determine if the program is ready for the MILDEP review. He also decides whether or not to recommend a “Paper ASARC/IT OIPT” to the MILDEP. The PM will prepare a recommended attendance list for the ASARC/IT OIPT based on the issues/outcomes of this meeting. In the event that issues still remain, the ASARC/IT OIPT Review will be held. The Recommended Attendance List will be provided to the ASARC/IT OIPT Executive Secretary before final invitations are issued.

Pre-briefing the DISC4—If the program falls under the oversight of the DISC4, then the PM must plan and arrange to brief the DISC4 prior to the MILDEP Review. Content of the pre-brief will be coordinated with the

VDISC4 at the Final ASARC/IT OIPT meeting, but will probably include a run-through of the presentation with a discussion of issues of interest to the DISC4. The DISC4 may provide his assessment of the program based on the briefing.

9.2 MILDEP Review

At the conclusion of the MILDEP Review, there are three possible decisions: (1) the program is not ready; (2) the program has issues remaining that need resolution by the ASARC, and; (3) the program has no remaining issues and a "Paper ASARC" will be recommended to the AAE. The PM should focus on the "Paper ASARC" outcome. This outcome is preferred and is almost certain if there are no program issues. This is in keeping with the current philosophy to minimize the number of high level meetings associated with an acquisition decision.

If the MILDEP determines that the program is not ready for the ASARC review, the decision will be accompanied with specific direction as to the deficiencies that must be corrected to have an acceptable program. If the MILDEP determines that there are serious issues that require the attention of the ASARC, then refer to section 8.3 for guidance on the ASARC procedures. If the MILDEP determines that a "Paper ASARC" is appropriate, the PM and DASC must coordinate with the ASARC Executive Secretary to ascertain if the recommendation is accepted by the AAE and to support the preparation of the staffing package. If the program is a DAB reviewed program and there are no issues, it is fairly certain that the MILDEP will recommend a "Paper ASARC." Additionally, he may provide guidance on briefing content or other matters that need attention prior to the OSD OIPT Meeting.

Attendance—Attendance at the MILDEP Review is more restricted than the Final ASARC IPT Meeting. In addition to the MILDEP, attendees should include the ASARC IPT managers (PM, DASC, WIPT Leaders, not the entire ASARC IPT membership), PEO, TSM, staff Principals or their representative if there are issues associated with their area of interest, the ASARC Executive Secretary, and the DISC4 or Deputy for Systems Management and HTI (depending on the type of program). In keeping with current practice, staff principals are not expected to attend unless there are issues of interest to them. It is the responsibility of the ASARC IPT staff members to brief/inform their principal of the outcome of the Final ASARC IPT Meeting and inform the PM/DASC of the principal's desire to attend the MILDEP Review.

Agenda—The agenda is similar to that of the Final ASARC IPT. Table XXIV-9 is a typical agenda for the MILDEP Review.

Preparations—The MILDEP Review will be arranged by the PM and the DASC. The ASARC Executive Secretary should be involved to provide advice, but room arrangements and notifications are the responsibility of the PM and DASC. The SECARMY conference rooms (2E687 A or B) are preferred choices but must be reserved early to ensure availability. The ASARC Executive Secretary will advise on the protocol for the seating layout and provide information on the latest experiences of MILDEP reviews, general trend of decisions, do's and don'ts, etc. The ASARC IPT members will be provided up-to-date copies of the MIPS and ASARC briefing for their principal. The PM should not be required to pre-brief any principals other than the MILDEP, but it is advisable that he pre-brief the DCSOPS(FD) in coordination with the DCSOPS AO/System Integrator(SI), the DASC, and the TSM.

Table XXIV-9
Typical MILDEP Review Agenda

Item	Presenter	Time
Introduction	PEO	5 min
User Briefing	TSM	10 min
Developer Briefing	PM	15 min
Operational Effectiveness	OPTEC	10 min
CIO Assessment DISC4 10 min		
Affordability	PAED	10 min
ASARC IPT Memo DASC 5 min		
Discussion of Issues	All	20 min
Summary of Decision	MILDEP	5 min
	Total	90 min

9.3 ASARC/IT OIPT

The ASARC/IT OIPT is established to provide senior acquisition managers and functional principals the opportunity to review designated programs at formal milestones to determine a program or system's readiness to enter the next acquisition phase. They make recommendations to the AAE (Army CIO for IT programs) and the VCSA, who co-chairs the ASARC, for programs for which the AAE is the MDA. In addition to Milestone reviews, a Special ASARC/IT OIPT may be convened at any time to review the status of a program. ACAT ID programs are subsequently reviewed by the DAB, where the MDA authority is the USD(A&T). An objective of the DoD Acquisition Streamlining procedures is to reduce the number of major program reviews; therefore, the MILDEP Review, concentrating on issues resolvable by the Army, will be the key Army review for ACAT ID programs. Formal ASARC meetings for ACAT ID programs are held only if issues remain unresolved after the MILDEP Review. ACAT IAM programs are subsequently reviewed by the OSD IT OIPT, where the MDA is the OASD(C3I). Note: The Special ASARC processes are especially important to convene when a program (not previously ACAT I) has exceeded or will exceed ACAT I funding thresholds and/or when such programs are between major milestone decisions.

Attendance—The ASARC is composed of staff officials and commanders listed in Table XXIV-1. The IT OIPT membership is listed in Table XXIV-1a. The ASARC/IT OIPT Executive Secretary has responsibility for preparing the attendee list and the subsequent notification of all three star equivalent attendees. The PM and the DASC will provide the ASARC/IT OIPT Executive Secretary a recommended attendance list based on the issues remaining at the conclusion of the MILDEP Review. The DASC will advise ASARC/IT OIPT members of the approved attendance list and ensure that the principals below the three-star level are notified.

Agenda—Table XXIV-10 is a typical agenda for the ASARC/IT OIPT Review.

Preparations—The final MIPS should answer all questions and identify the issues needing resolution by the ASARC/IT OIPT. The ASARC/IT OIPT briefing presentation should be prepared based on the information/data included in the MIPS. Backgrounds on all areas to be briefed in the ASARC/IT OIPT—user, developer, tester, and affordability—are contained in the MIPS. Some PMs may choose to include the ASARC/IT OIPT briefing slides with the MIPS, thus having a single document/package for the ASARC/IT OIPT Principals to review. The overall briefing package should include information on the topics/areas indicated below:

- The User briefing should focus on issues related to system requirements and should provide a validation of the requirement. Discussion of the threat must be included in order to identify those current projected enemy capabilities that drive the requirement or affect its ability to operate in the threat environment. At MS III, certification is required that the forces will be prepared to accept and operate the system when fielded.

Table XXIV-10
Typical Agenda for ASARC/IT OIPT Reviews

Item	Presenter	Time
Introduction	PEO	5 min
User Briefing	TSM/FP	10 min
Developer Briefing	PM	15min
Operational Effectiveness	OPTEC*	10 min
CIO Assessment DISC4 10 min		
Affordability	PAED	10 min
Discussion	All	25 min
Summary of Decision	AAE/VCSA	5 min
	Total	90 min

*If there are no test issues, the PM may brief this portion of the presentation

- The Developer briefing should include an update of accomplishments to date and compliance with previous directions; primarily a description of the issues related to alternatives for the future of the program. The briefing must also address acquisition strategy, schedule, current and future Exit Criteria, and cost. Schedule issues and associated risks must be discussed.

- The OPTEC briefing should present the results of required testing and evaluation and must indicate if the system is operationally effective, survivable, and suitable (if no test or evaluation issues exist, the PM may cover testing results in the developer part of the briefing).
- PAED will brief the Army Cost Position and Affordability Assessment.
- The ASARC/IT OIPT Facilitator/DASC will present any unresolved issues and the Army Staff's Risk Assessment.

The final briefing package should be in color. If possible, all portions of the briefing should be prepared by the same activity to ensure consistency and standardization of appearance. It is also extremely helpful to have the preparer of the slides located in the vicinity of the Pentagon to ensure the quick turnaround of briefing changes.

Arranging for the Review—The date of the ASARC/IT OIPT is established months in advance by the ASARC/IT OIPT Executive Secretary. The ASARC/IT OIPT Executive Secretary will arrange for the ASARC/IT OIPT to be placed on the calendars of the ASARC/IT OIPT members. The PM and DASC are responsible for the notification of the remaining attendees. The ASARC/IT OIPT Executive Secretary will arrange for the conference room and the seating arrangements.

Pre-briefing Requirements—The PEO, PM, DISC4/Deputy for Systems Management and HTI, TSM, DASC, and System Integrator (SI) will brief the VCSA prior to the ASARC. The ASARC Executive Secretary will arrange this briefing through the ECC. The PEO will lead the briefing and designate what roles the other members of the briefing party should play. The briefing team should be limited to no more than eight personnel. A Read Ahead will be prepared and provided to the ECC at least two days before the pre-brief.

The AAE does not normally require a pre-brief as he is kept informed by the MILDEP. If the AAE desires a pre-brief it will be similar to that for the VCSA. The PM and DASC should check with the ASARC Executive Secretary to determine if a pre-brief is required for the AAE. Their ASARC IPT representative should brief other principals invited to the ASARC. The ASARC IPT representative has the responsibility for notifying the PM or DASC if their principal desires a pre-briefing or meeting with the PM.

Outcomes—The normal outcome of an ASARC/IT OIPT is an Acquisition Decision Memorandum (ADM) and an approved Acquisition Program Baseline. The ADM and APB are discussed in Section 8.7.4.

Paper ASARC—If the AAE accepts the MILDEPs recommendation that the formal ASARC be canceled and that there be a “Paper ASARC,” then the proposed ADM is submitted to the AAE for approval and signature. If the APB is delayed for any reason, its disposition must be documented in the ADM. Coordination of this entire action is accomplished by the ASARC Executive Secretary.

10.0 Suggestions for a Successful Milestone Review

Although a program may experience some turbulence prior to an ASARC/IT OIPT Review, this can be minimized if the PM starts planning early, devotes adequate resources and assembles a first rate team to support the effort. The following suggestions/comments and planning factors are provided to assist the PM Staff in its preparation for a Milestone Review.

10.1. Management Tips

(1) Documentation Status: Must be continuously maintained and kept current. Responsibility for this action should be delegated to a single individual within the PMO.

Recommendation: Establish a document roster which includes the individual/agency responsible for developing the document, phone number, status, delivery date, update milestone(s), and a list of other documents which this document impacts (DoD 5000.2-R and AR 70-1 are references).

(2) PM-TSM-FP Views: Do not assume that the developer and user see everything the same way. A special effort must be made by both parties to ensure everyone concerned is on the same sheet of music. Changes must be coordinated between the PM, TSM, and FP prior to changing the briefing.

Recommendation: The telephone, E-mail and FAX machine are critical tools in keeping everyone informed. The need to establish a daily debriefs routine between key PM, TSM, and FP personnel is essential. The TSM, PM, and FP must coordinate all changes to their briefings with each other. The TSM and FP “identifies the requirement”; the PM “identifies how the requirement is met”. They must agree.

(3) Technical Advice: Do not “short change” the ASARC/IT OIPT of area experts. No one person can know/master a complex program. Ensure the right people are available when you need them. Examples are ILS, MANPRINT, Testing, Budget, and any special technology.

Recommendation: The PM must designate a knowledgeable ASARC/IT OIPT Coordinator for the Pentagon ASARC/IT OIPT team. Specialty expertise must augment the team as required, e.g., Test, ILS, etc. The PM should not be the “point man” for the ASARC IPT in the Pentagon—he is simply too busy. A member of his staff, with a broad overview of the system should fill this role.

(4) DASC and SI: They must be directly involved and kept well informed. They should be involved early and made active players in the process. Almost daily contact with and between them is essential to help identify and resolve issues as they arise. Since they are assigned to HQDA to represent the PM and the user, respectively, keeping them in the loop is essential.

Recommendation: Some programs are without a DASC. The PEO-LNO often fills this position and because of workload does not have sufficient time to devote to the system. Use of a knowledgeable experienced support contractor can provide invaluable assistance to the PEO-LNO and minimize the impact of this manpower shortage.

(5) ASARC IPT: The ASARC/IT OIPT managers should meet in executive session prior to and after each ASARC IPT meeting. This executive session should consist of the PM, TSM, FP, DASC, SI, and any person whose expertise is specifically required.

Recommendation: An executive session enables the key members of the program to get together before start of the meeting to discuss agenda items and any new business issues which need to be presented to the group. An exit session need only be conducted if there are unresolved issues at the completion of the general meeting. These meetings should be held in the Pentagon where the majority of the membership is located. Lastly, the ASARC/IT OIPT members responsible for documentation preparation must be closely monitored and held accountable during the process leading to the ASARC/IT OIPT. A useful technique is to have each individual brief the status of his document at each meeting. Don't let them off with a general statement of “it's-on-track.” As a minimum, a detailed schedule to completion must be presented.

(6) Milestones: A milestone tracking process must be developed and tightly monitored.

Recommendation: There are two critically important management tools that must be developed to drive the system/program to a successful Milestone decision. First, a comprehensive Program Management Plan should be developed which will provide management at every level. Hewlett-Packard has an excellent “how to” manual on Total Quality Management which would provide this plan. Second, a software package should be procured that will allow automation of this program management plan to provide useful and time critical reports.

(7) PEO Involvement: The PEO organization must become involved in the program early enough to provide the “clout” that is sometimes necessary when program issues get pushed aside or stalled. Conversely, early involvement will normally preclude an organization from becoming an impediment at the 11th hour.

Recommendation: The best way to build interest in the program is by keeping the right people well informed and to make them feel they are part of the team. An orientation briefing to the PEO and his staff early on will help set the tone. As periodic updates are made to program briefings, they should be forwarded to the PEO so that he is kept abreast of the current status.

(8) Rehearsals: Key briefings need to be rehearsed in the presence of an audience for several reasons. First, the briefing team must become familiar with each other's delivery style and the content of their briefing. Second, a rehearsal will help gage the length of each portion of the briefing. Finally, rehearsal allows the audience time to critique the delivery and briefing substance prior to the final presentation.

Recommendation: If at all possible, conduct the rehearsals in the actual briefing room. This allows the briefers to become oriented to the room and gives the support staff an opportunity to become familiar with the briefing equipment/capabilities/limitations of the facility.

(9) Points of contact: Whenever possible, establish single points of contact for documents, briefings, and scheduling.

Recommendation: It is much easier to deal with a single individual and every effort should be made to accomplish this.

(10) Scheduling: Get briefings scheduled as far in advance as possible.

Recommendation: Changes to briefing times/dates appear to happen more frequently when they are scheduled late. The DASC should schedule briefings at least 20 days in advance. The DASC should check with the principal's Executive Officer two days prior to a scheduled brief to ensure that no changes have occurred. Also, establish, maintain, and post a schedule of the briefings for each week so that everyone knows

what is expected. It is extremely important that this information be kept current and available to the key players in the ASARC/IT OIPT process.

(11) Briefing Depth: Backup slides are important.

Recommendation: Backups are the result of our thought process. They should never be considered as just “backups” to the main briefing. In essence they permit the PM, TSM, and FP to think an issue through. They may never be used but have served their purpose if they have solidified a thought/concept in the briefers mind.

(12) Administrative Support: The on-site Pentagon ASARC/IT OIPT must plan for every possible need to meet their requirements during their stay at the Pentagon.

Recommendation: Come prepared. Bring enough supplies to meet all contingencies and establish several alternative means of obtaining supplies should the need arise. It is extremely important that someone on the team be familiar with the Pentagon office structure and floor layout, where to obtain administrative support such as reproduction capabilities, etc., and to identify those Pentagon offices which can provide other administrative support to the team on an emergency basis. Contact the ASARC Executive Secretary if you need assistance.

10.2 Suggested Planning

Table XXIV-11 provides a suggested planning guide for a successful milestone review.

Table XXIV-11
Suggested Planning Guide for a Successful Milestone Review

Action	Start Time
Establish a list of required program documentation and information needed by the program for the Milestone. Identify key members of ASARC/DAB management team to include OSD Action Officer for ACAT ID programs. Outline a strawman plan to reach the Milestone. If the program management plan is properly constructed, this strawman can be directly lifted from that document. PM initiates.	ASARC minus 14 Months
PM/TSM initial caucus with DASC, SI and ASARC Executive Secretary. Review Milestone documentation strategy, IPT(ASARC IPT/WIPT) structure, assign responsibility to an individual to maintain documentation status, and establish administrative requirements.	ASARC minus 12 months
PM/TSM prepare and submit Documentation Strategy and IPT Structure to the DASC for processing and approval.	ASARC minus 11 Months
MILDEP provides decision on Documentation Strategy and IPT Structure	ASARC minus 11 Months
Schedule and convene initial ASARC IPT (ASARC IPT) meeting (PM Chairs, DASC facilitates). Insist that all members of the ASARC IPT attend the initial meeting. Some areas which should be discussed at the ASARC IPT meeting are: ▪ Program Status ▪ ASARC IPT Operating Guidelines ▪ Functional Area Team Structure ▪ Milestone Preparation Schedule ▪ Administrative Factors/Requirements ▪ Approved Documentation Strategy	ASARC minus 10 Months
Hold ASARC IPT meeting. Discussion topics should include: ▪ Program Status ▪ Documentation Status (each responsible individual/agency should present an executive summary orally and in writing of document status) ▪ Identify potential “long poles” e.g.., BOIP Update, Transportability Analysis, Operational Assessment, etc. ▪ Establish Action Item List; follow through on assigned actions	ASARC minus 9 Months
Begin development of ASARC briefing. Establish a “game plan” for ASARC/DAB Management Team including players and responsibilities. Convene ASARC IPT meeting.	ASARC minus 8 Months
Through ASARC IPT/WIPT teams, establish exact documentation staffing requirements, administrative requirements and logistical support requirements. Establish MILDEP Review and ASARC administrative support milestone calendar. Determine “areas of interest” for potential pre-briefs of principals and crosswalk these with key program documents with use of backup slides. Submit documentation (as appropriate) to DA for staffing. Have DASC develop and maintain a complete POC list. Convene ASARC IPT meeting.	ASARC minus 7 Months
Continue to “fine tune” MIPS (Decision Document) and ASARC briefing. Confer with ASARC IPT action officers to ensure that they will have sufficient information to conduct pre-briefs of their principals. Review documentation status. Convene ASARC IPT meetings as required to finalize documents and briefing materials.	ASARC minus 4 Months

11.0 Summary

The purpose of this guide is to provide an overview of the Army Systems Acquisition Review Council/Information Technology Overarching Integrated Product Team (ASARC/IT OIPT)/Defense Acquisition Board (DAB) process and serve as a reference document to use in preparation for these reviews. Keeping in mind that minor procedural and policy changes will occur, the data contained herein should be verified in accordance with the suggested Milestone preparation schedule at Section 6.0. Approximately 16 to 18 months prior to the projected ASARC date, the Program/Project/Product Manager should initiate preparation activities for the Milestone Review.

ANNEX A
Example of Exit Criteria

Note: The following samples are provided as examples of good, well formatted exit criteria. Exit criteria for each program should be tailored to the specific needs of the program. Use of the specific samples of exit criteria below is not mandated.

1. Demonstrate the ability of the SYSTEM A to deliver high volume fires and thermal management on either a weapons hardstand or prototype by conducting four, 15-round fire missions at a rate of no less than six rounds per minute and simulating ten rounds per minute for three minutes.

2. On either a weapons hardstand or prototype, demonstrate the ability to control the Liquid Propellant Regenerative Process by firing four, four-round Multiple Round Simultaneous Impact missions with all rounds impacting within eight seconds.

3. Perform a survivability move of at least 750 meters in 125 seconds; emplace the SYSTEM and achieve a ballistic solution in 65 seconds.

4. Upload the SYSTEM B with 100 complete rounds (projectile, propellant, and fuse) in 70 minutes using two projectile types.

5. Demonstrate docking and transfer of 40 complete rounds (projectile, propellant, and fuse) from SYSTEM A to SYSTEM B, and undock in 13 minutes.

Note: The ASARC Executive Secretary will include the Exit Criteria as an attachment to the ADM as appropriate.

ANNEX B
Acquisition Category Definitions and Descriptions

Program Category	Program Management	Primary Criteria ($M FY96 Constant)	Milestone Review Forum	Milestone Decision Authority
ACAT I (C/D)				
ACAT ID	PEO/PM	More than $355M RDTE More than $2.135B procurement	DAB	USD(A&T)
ACAT IC	PEO/PM	More than $355M RDTE More than $2.135B procurement	ASARC	AAE
ACAT IA (M/C)				
ACAT IAM	PEO/PM	Excess of $30M single year Excess of $120M total program Excess of $360M total life-cycle costs	DoD IT OIPT	ASD(C3I)
ACAT IAC	PEO/PM	Excess of $30M single year Excess of $120M total program Excess of $360M total life-cycle costs	Army IT OIPT	Army CIO
ACAT II				
ACAT II	PEO/PM/MACOM CDR	More than approx. $140M RDTE More than approx. $645M procurement	ASARC	AAE
ACAT IIA	PEO/PM/MACOM CDR	$10M-$30M single year $30M-$120M total program $159M-$360M total life-cycle costs	Army IT OIPT	Army CIO
ACAT III				
ACAT III	PM	High visibility, special interest (includes AIS)	IPR	PEO/ MAT CMD CDR[1]
ACAT IV				
ACAT IV	Systems Mgr, or equivalent	All other acquisition IPR programs (including AIS)	IPR	MAT CMD CDR[2]

Notes:

1. The Materiel Command Commander (MAT CMD CDR) is PEO-equivalent level commander of a materiel developing command. In AMC, the Commanding General of AMC is the MDA, however, he has re-delegated MDA authority to the Major Subordinate Command (MSC) Commanders, and the Deputy for Systems Acquisition (DSA). MDA authority may be further re-delegated to no lower than a GO/SES level. Re-delegation will be forwarded through channels to the ASARC Secretary (SAAL-ZBA).

2. MDA authority may be re-delegated at the MAT CMD CDR's (e.g., MSC CDR/DSA in AMC) discretion. Re-delegation will be forwarded through channels to the ASARC Secretary (SAAL-ZBA).

Appendix XXV
Insensitive Munitions/Unplanned Stimuli

Points of contact:
Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), Army Executive Agent for Insensitive Munitions, 103 Army Pentagon, ATTN: SAAL-ZCA, Washington, DC 20310-0103
U.S. Army Defense Ammunition Logistics Activity, Insensitive Munitions Office, ATTN: AMSTA-AR-AL, Picatinny Arsenal, NJ 07806-5000
U.S. Army Materiel Command, ATTN: AMCRDA-PP, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001

References:
Memorandum, Army Acquisition Executive, Directive Dated October 22, 1996, Subject: Munitions Survivability Requirements for the Design and Procurement of New or Modified Ammunition/Weapons.
Memorandum, Army Executive Agent for Insensitive Munition, Guidance dated January 17, 1997, Subject: Munitions Survivability Requirements for the Design and Procurement of New or Modified Ammunition/Weapons.
MIL-STD-2105B, "Hazard Assessment Test for Non-Nuclear Munitions."
NATO Standardization Agreement 4439, March 1995.
AOP-39, "Guidance on the Development, Assessment and Testing of Insensitive Munitions (MURAT)."
AR 71-9, "Materiel Requirements."
CJCSI 3170.01, "Requirement Generation System Policies and Procedures."
TB 700-2, "DoD Ammunition and Explosive Hazards Classification Procedures."

Introduction and Purpose

An insensitive munition (IM) is a munition (energetic device) which reliably fulfills its performance, readiness and operational requirements on demand, but which minimizes the probability of inadvertent initiation and severity of subsequent collateral damage to weapons platforms, logistics systems and personnel when subjected to unplanned stimuli.

Catastrophic incidents experienced aboard aircraft carriers, land combat systems, numerous transportation and storage mishaps, and the initiation of the Live Fire Test and Evaluation Program led to the establishment of formal IM programs for each of the Services.

The reactive nature of munitions makes them susceptible to violent reaction by unplanned stimuli and threat attack (for example, heat, shock, EMR, energetic impact, etc.). This presents a major threat to the survivability of Army weapons platforms, logistics/transportation systems and stockpiles.

IM Objectives

The objective of the IM program is the development and implementation of munitions which will not react or have minimal reaction to unplanned stimuli, thereby increasing their survivability and the survivability of combat systems, storage systems, and resupply and transportation systems while maintaining operational performance. The intent of the Army's IM program is to:

1. Increased crew and munitions/system survivability;
2. Reduced damage to collateral systems (combat and logistical equipment);
3. Reduce vulnerability of stockpiles and resupply systems; and
4. Reduced probability for disastrous accidents.

IM Technical Approaches

Historically, vulnerability reductions have been achieved primarily through subsystem optimization. Examples include adding extra armor to fighting vehicles, compartmentation on the M1 Tank and low vulnerability propellant for M60 tank munitions. Emerging requirements for future tactical and resupply systems encompasses increased performance, storage of larger quantities of more powerful munitions/missiles, and greater survivability against increased threats. The historical solution of subsystems/increased performance requirements can only be achieved through a system level optimization process involving the application of advanced system design concepts and essential IM technologies as shown in Figure XXV-1.

IM Program Elements

The planning and execution of an IM program requires the development and integration of several key IM program elements: IM Implementation procedures, Program Management Documentation, IM Test and Evaluation Strategy, and the Army policy on IM waivers.

Integrate IM into the Army's decision milestone review process by ensuring that appropriate IM documentation for IM testing, program planning, and waiver requests are prepared and assimilated into the milestone review Program Management Documentation package. The following guidance applies:

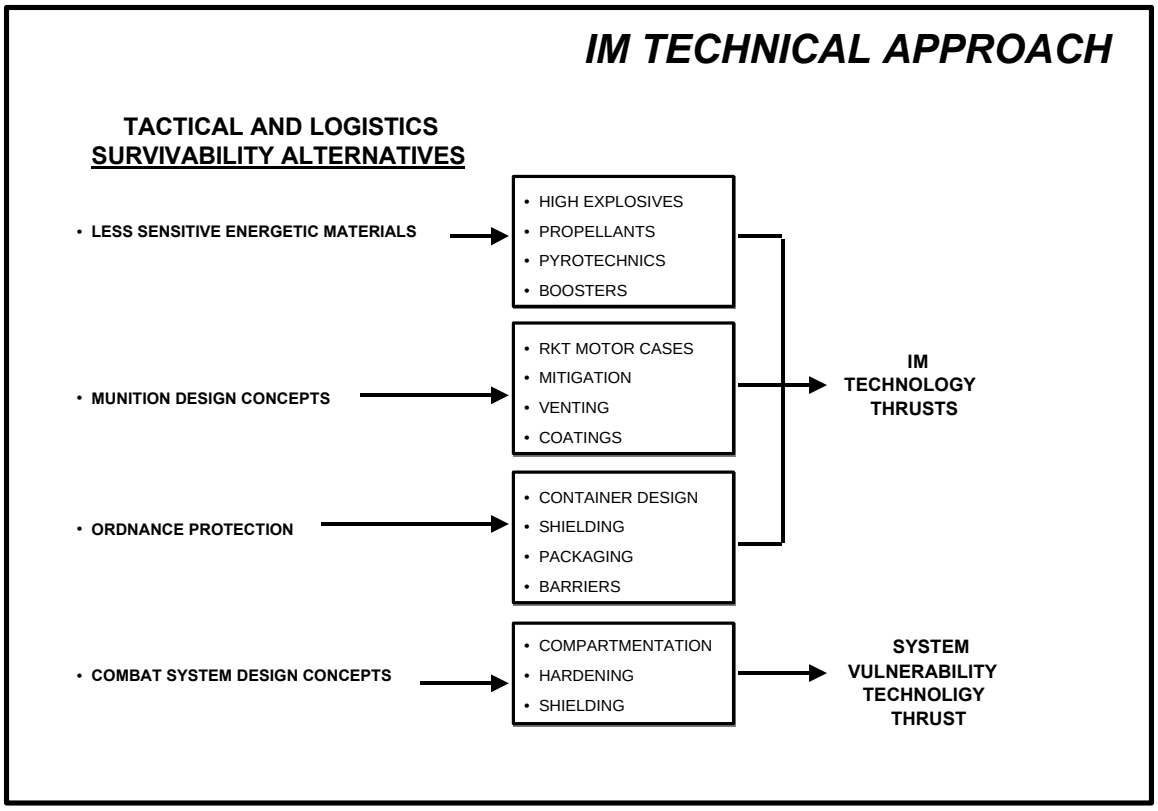


Figure XXV-1. IM Technical Approach

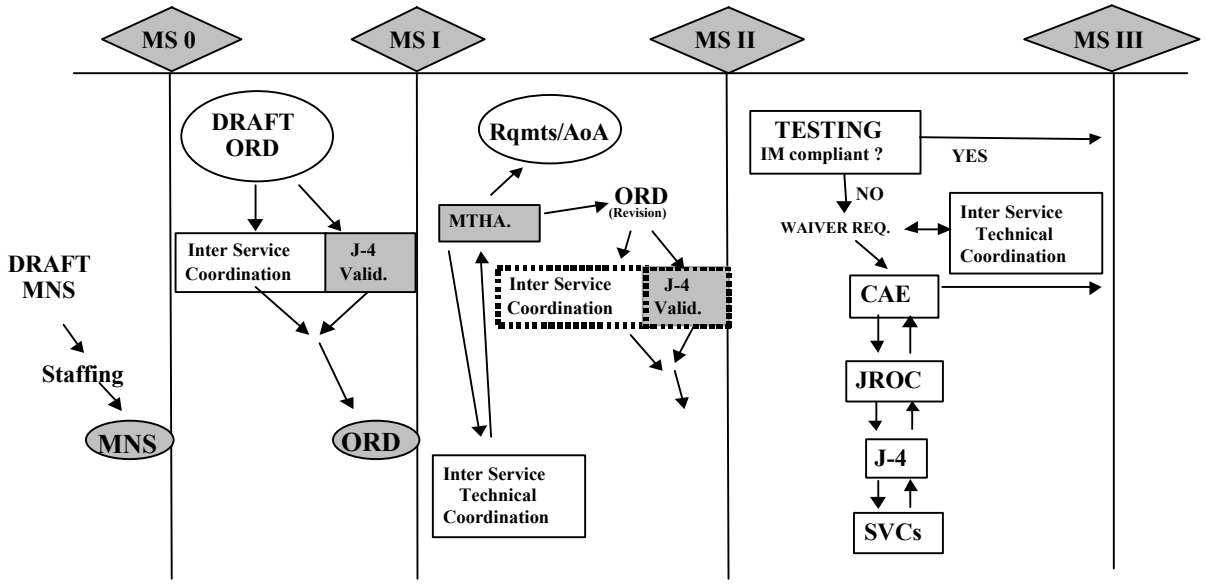


Figure XXV-2. IM for New Acquisitions

1. IM Requirement: The IM requirement is specified in the Operational Requirements Document (ORD) as determined by the requirements validation process. An overview of the requirements process and related service and inter-service coordination is provided at Figure XXV-2.

2. IM Strategy: The Insensitive Munitions/Unplanned Stimuli Strategy & Assessment (IMS&A) section is intended to be part of the Modified Integrated Program Summary (MIPS) Milestone I decision review and subsequent decision reviews (see Part 5, Paragraph 5.8). Annex 1 contains a sample format for the IMS&A.

The IMS&A provides the plan for achieving compliance with IM requirements. It should, at a minimum, describe the developmental system and include the Munitions Threat Hazard Assessment (Munition THA), IM Technology/Alternatives Analysis, IM test results and/or analysis, funding profile, and schedule. Some tailoring may be appropriate for the specific acquisition program and acquisition milestone. A sample format for the Munition THA is provided at Annex 2 (to be published).

The Milestone Decision Authority (MDA) schedules and coordinates the program technical assessment/IMS&A with the Army Executive Agent for Insensitive Munitions (AEA-IM) (through Defense Ammunition Logistics Activity (DALA) and Munitions Vulnerability Assessment Panel (MVAP)) prior to the Decision Review. The focus is on energetic devices including ammunition, mines, demolition, pyrotechnics, rockets, and missiles. These Panels are especially valuable in providing early assessments of IM compliance based on threat issues and IM technologies chosen by the acquisition manager or Project/Product Manager (PM). The early coordination is beneficial in identifying appropriate technology insertion. In addition, the potential materiel waiver issues may also be recognized early in the program to permit structuring a “get well” plan.

For traditional acquisition programs (those that have Milestone 0/I/II/III decisions), the Munition THA is completed not later than 180 days after the Milestone I decision and updated thereafter, as appropriate, for subsequent decision reviews. Non-traditional programs (including Advanced Technology Demonstrations (ATDs), Advanced Concept Technology Demonstrations (ACTDs) and programs with combined Milestone II/III) have Munitions THAs completed not later than 180 days after the program is approved, with updates, as appropriate, for subsequent reviews.

IM testing requirements should be included in the Test and Evaluation Master Plan (TEMP). The TEMP should describe the IM tests, test procedures and data collection and analysis processes to be used.

IM Waivers

The Unplanned Stimuli Provision of DoD 5000.2-R addresses all munitions. Emphasis is especially placed on those in joint operations that put a premium on interoperability and safety. An IM waiver is required unless the munition has been “grandfathered” by appropriate authorities. An IM waiver requires staffing

through appropriate channels and subsequent approval by the Army Acquisition Executive (AAE). A waiver request should only be submitted after a baseline IM test program and/or analysis demonstrates that one or more requirements cannot be met. The waiver request should be in sufficient detail to become a stand-alone document. The waiver request format should contain, at a minimum, the titles contained at Annex 3.

IM Considerations in New Munition System Development

During the technology base phase, critical technical issues and resources requirements are identified for proposed systems. Consideration of threats and logistical/tactical survivability is particularly important during this phase. After the Proof of Principle (POP) or ATD is conducted, an IMS&A is prepared. IM requirements should be address in the Request for Proposal (RFP).

As the developmental munition/system matures in acquisition development, it is appropriate to update the IM analysis and evaluation to assess the appropriateness of targeted IM design parameters on original IM objectives relative to tactical and logistical survivability issues. Based on the initial IM analysis and evaluation, the IMS&A is updated in preparation for the Engineering and Manufacturing Development (EMD) milestone review. Following the EMD decision, IM requirements should be included in the EMD RFP. IM requirements for the system and testing are also included in the ORD and TEMP. The outline for the typical new system development is depicted in Figure XXV-3.

An IM Test and Evaluation (T&E) Plan is developed and submitted to the MVAP for review. The plan is revised as required to assure all IM tests and evaluation methods are acceptable. Once the IM T&E Plan has been finalized, IM tests are conducted along with other technical tests and user tests. The IM test results are submitted to the MVAP for determine if all requirements have been properly demonstrated.

IM results are to be included in the Type Classification In Progress Review (TC IPR) package. If all requirements are not met, the PM determines the appropriate strategy for proceeding or whether a fix is achievable before the scheduled TC IPR. If a fix is possible, a retest is conducted to demonstrate that the deficiency has been eliminated. If a fix is not possible or the retest is not successful, the PM prepares a request for waiver and forwards it through the AEA-IM to the AAE for approval. DALA has been established by the AEA-IM as the R&D Proponent, and coordinating agent for IM waiver processing. The AEA-IM forwards all waiver requests through DALA and the MVAP for technical review and IM assessment prior to recommending a formal Army position to the AAE. The AAE submits the Army's waiver position to the Joint Requirements Oversight Council (JROC) for review and validation. The waiver is reviewed yearly by the MVAP to determine if new technology has become available to correct the deficiency and forward such to the PM and AEA-IM. When the new technology is cost effective, an IM Product Improvement Program (PIP) is submitted to correct the deficiency.

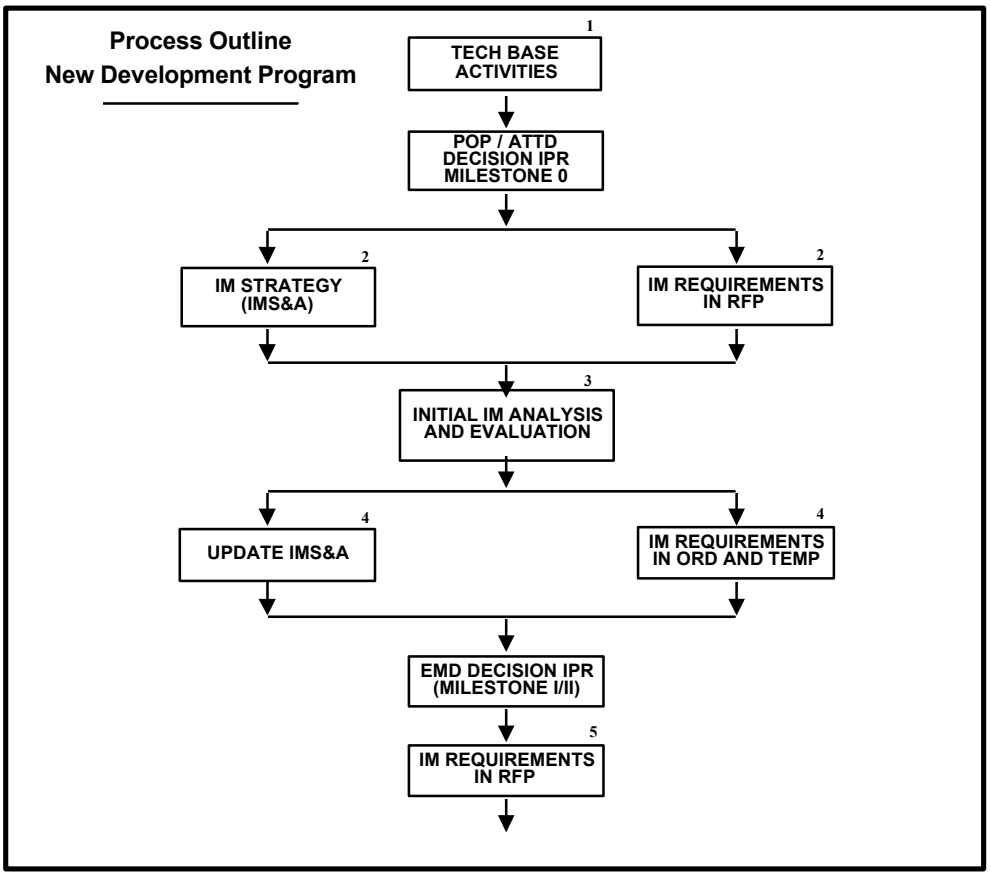


Figure XXV-3. IM Process for New Munition System Development

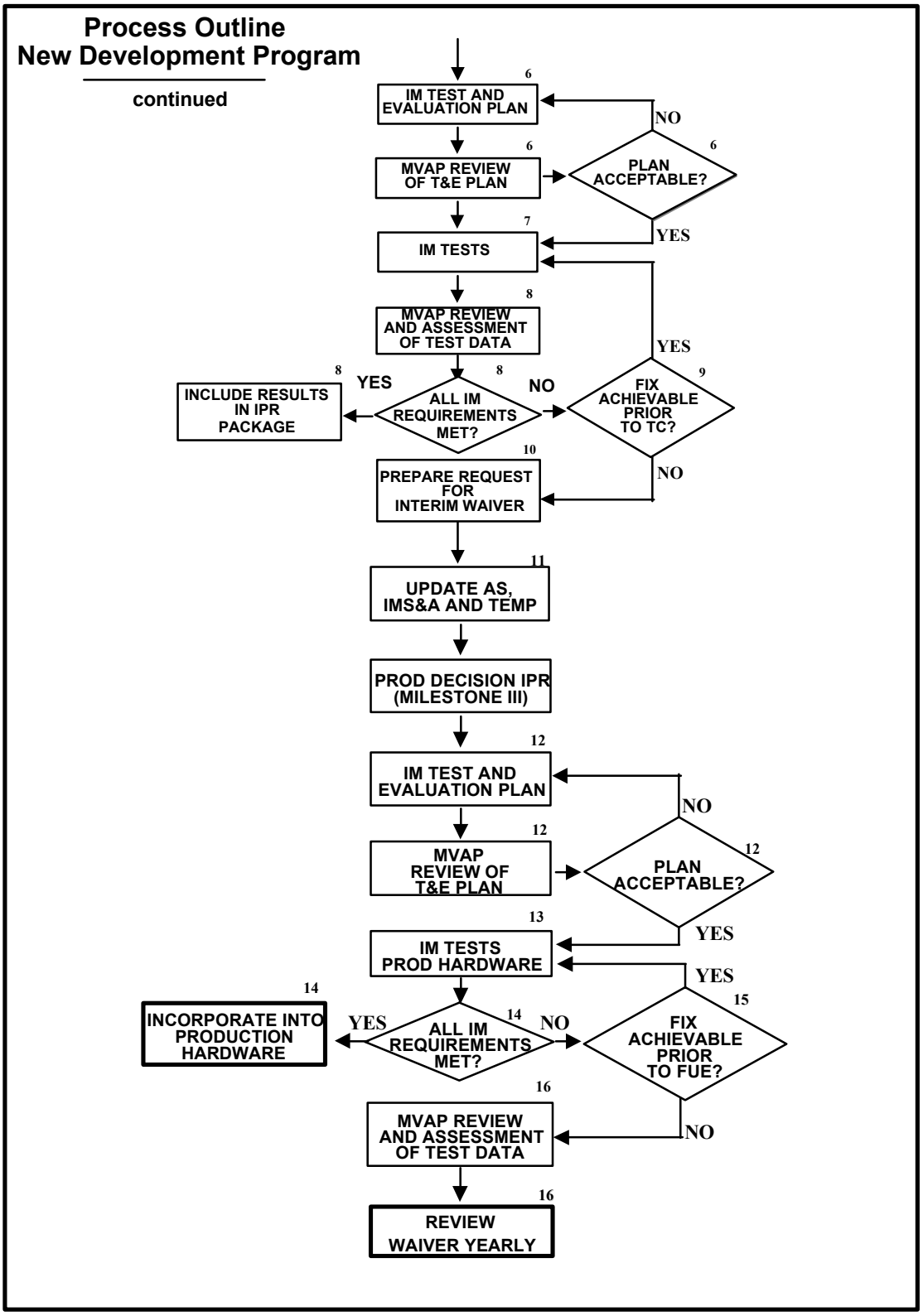


Figure XXV-3. IM Process for New Munition System Development Continued

Non-development Item/Modification Program

The following is recommended if an item has proceeded beyond Type Classification or a Commercial and Non-Developmental Item (CaNDI) acquisition strategy is used to implement IM.

1. An IMS&A is prepared.
2. An IM T&E Plan is developed and submitted to the MVAP for review.
3. The plan is reviewed to assure all test and evaluation methods are acceptable.
4. Once the IM T&E Plan has been finalized, IM tests and/or analysis on the current system should be conducted to obtain baseline performance results.

The IM test results are submitted to DALA and MVAP to determine if all requirements have been demonstrated. If all requirements have been met, a final report is prepared and submitted to the PM and AEA-IM. If all requirements have not been met, the PM prepares a request for waiver and forwards it through the AEA-IM to the AAE for approval. The same process applies with CaNDIs/PIPs as with new munitions systems, the AEA-IM forwards all wavier requests through DALA and the MVAP for technical review and an IM assessment prior to recommending a formal Army position to the AAE. The AAE submits the Army's waiver position to the Joint Requirements Oversight Council (JROC) for review and validation.

The PM evaluates whether it is cost effective to initiate a PIP to correct any deficiencies. If it is decided not to pursue a PIP, the request for waiver is prepared. The wavier is reviewed periodically by the MVAP to determine if new technology has become available to correct the deficiency and forward to the PM and AEA-IM. When the new technology is cost effective and planned production has increased to the point that a PIP would then be justified, an IM PIP is submitted to correct the deficiency. An IM retest, utilizing PIP hardware, is conducted. Once the IM PIP has been approved, the IMS&A is updated and the PIP is executed. If the PIP retest is not fully successful, the PM requests renewal of the waiver.

The overall outline for NDI development is depicted in Figure XXV-4.

Re-procurement and Re-Production of Munitions

This section refers to fielded munitions. DoD 5000.2-R requires life cycle consideration of all munitions for IM compliance consistent with requirements. Those shall be determined during the requirements validation process and updated as necessary throughout the life cycle. Periodic reviews are implemented by the MVAP assessing the status of fielded munitions.

The Army will establish a plan, program budgeting process, and publish guidance consistent with the DoD directive. The scope of guidance includes applicable technical assessments, testing, technology insertion of fielded munitions, and waivers relative to re-procurements and re-production of these items. Product improvements may be initiated to improve IM compliance of fielded munitions.

An Army IM database is maintained by DALA and in conjunction with the Navy, USAF and USMC. The IM database will contain IM technologies, classification, and IM compliance of all Army munitions.

Test and Evaluation Strategy

There are three sets of tests used to qualify and assess munitions with respect to threats and hazards. The first two of these tests relate specifically to IM issues. The third test does not have a direct relationship to IM, but the test results can be considered in the waiver request process. These tests are:

1. IM Tests contained in MIL STD 2105B are used to determine a munitions sensitivity to given stimuli. IM tests are required by the Joint Services Requirements for Insensitive Munitions.

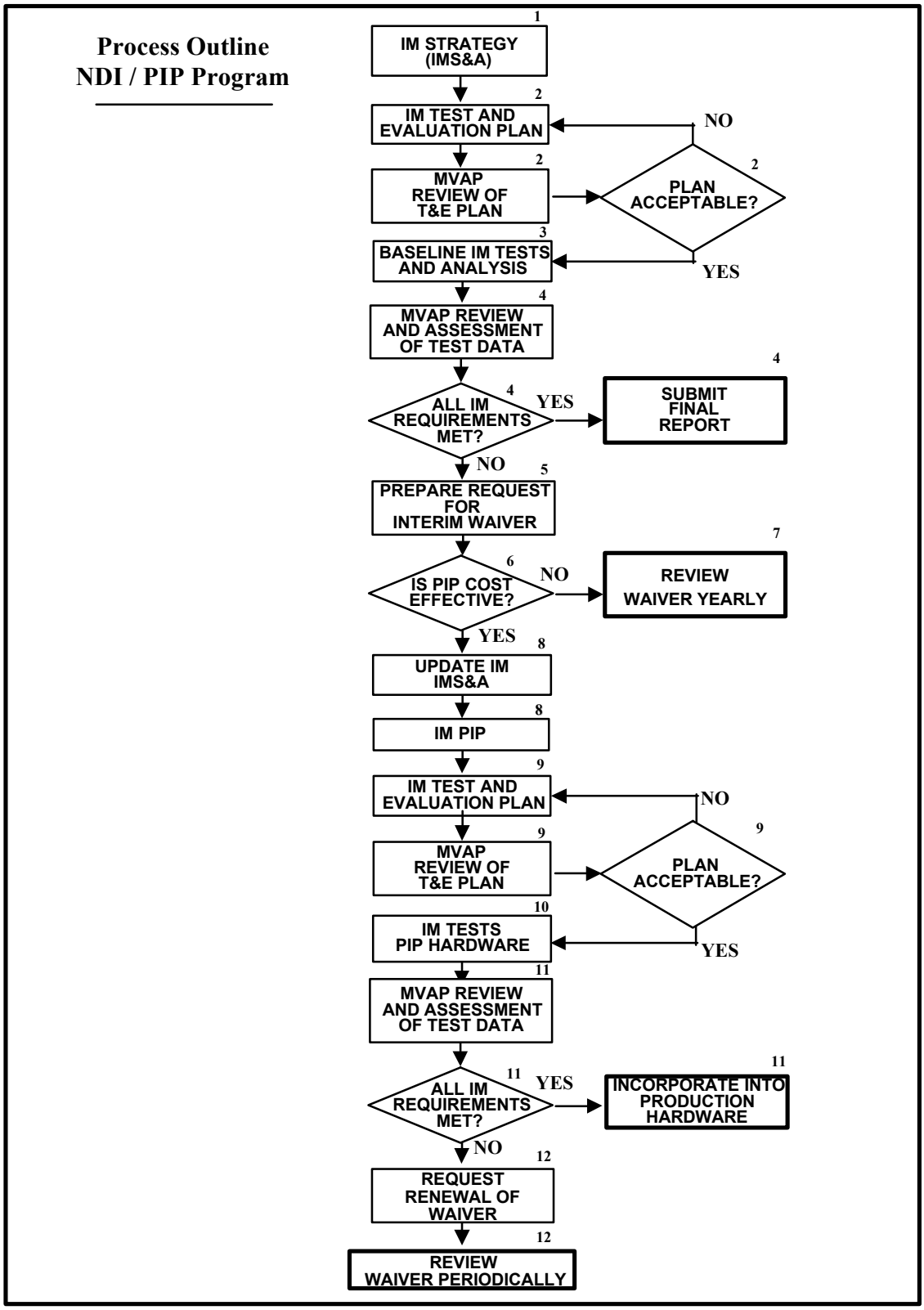


Figure XXV-4. IM CaNDI/PIP Development

2. Hazard Classification Test used to classify munitions for shipping and storage purposes. Hazard Classification tests are described in Army TB 700-2 and run in conformity with United Nations (UN) procedures and in conjunction with NATO Standardization Agreement (STANAG) 4439 and Guidance on the Development, Assessment and Testing of Insensitive Munitions (MURAT), AOP-39.

3. System vulnerability test conducted on Army systems to assess system's unique vulnerability and survivability requirements. To effectively deal with the myriad of Army munitions/weapon systems involved and IM related issues, a formal process under the auspices of the Defense Ammunition Logistics Activity and the MVAP has been established to assist in defining IM test programs, develop evaluation criteria, and evaluate test results.

The Army IM T&E strategy encompasses tailoring test plans to the maximum extent possible to address all three sets of test requirements with the minimum number of tests. The tests strategy involves using MIL STD 2105B and TB 700-2 and adding and/or modifying test based on the munition threat, vulnerability, and safety issues. The test and evaluation programs are fashioned to the extent possible to assure that all requirements are fully assessed in one coordinated test program.

IM Test and Evaluation Guidelines

MIL STD 2105B is the military standard approved for use by all components of the Department of Defense (DoD). A summary of IM testing guidelines is contained in MIL STD 2105B, Section 4. This covers test procedures and tests for assessing IM performance characteristics and associated safety. It provides the framework for a consolidated safety and IM test program.

IM Waiver Process

DoD 5000.2-R requires that all IM waivers be submitted to the JROC for validation. Every effort should be made to ensure that Service issues have been identified during milestone decision reviews. If the situation arises when one or more of the IM tests is not passed, the PM or Item Developer must submit a formal waiver request to the Army Acquisition Executive for approval. The following guidelines apply:

1. A waiver request should only be submitted for the full system and not for sub-components.

2. Requests for waiver should be submitted only after a baseline IM test program and/or analysis has been completed to provide sufficient data to evaluate the severity of reaction for each test.

3. The rationale for the Request for waiver should be considered based on such issues as:
   a. Lack of available technology.
   b. Prohibitive cost.
   c. Lack of sufficient production.
   d. Urgent operational requirement.

4. No permanent waiver will be granted.

Waiver requests are incorporated into the Army's milestone decision review process. Staffing of a waiver request should be accomplished prior to the scheduled Milestone III (MS III) decision review so IM issues can be identified and addressed. Figure XXV-5 shows the standard procedure used for staffing and coordination of waiver requests for all programs.

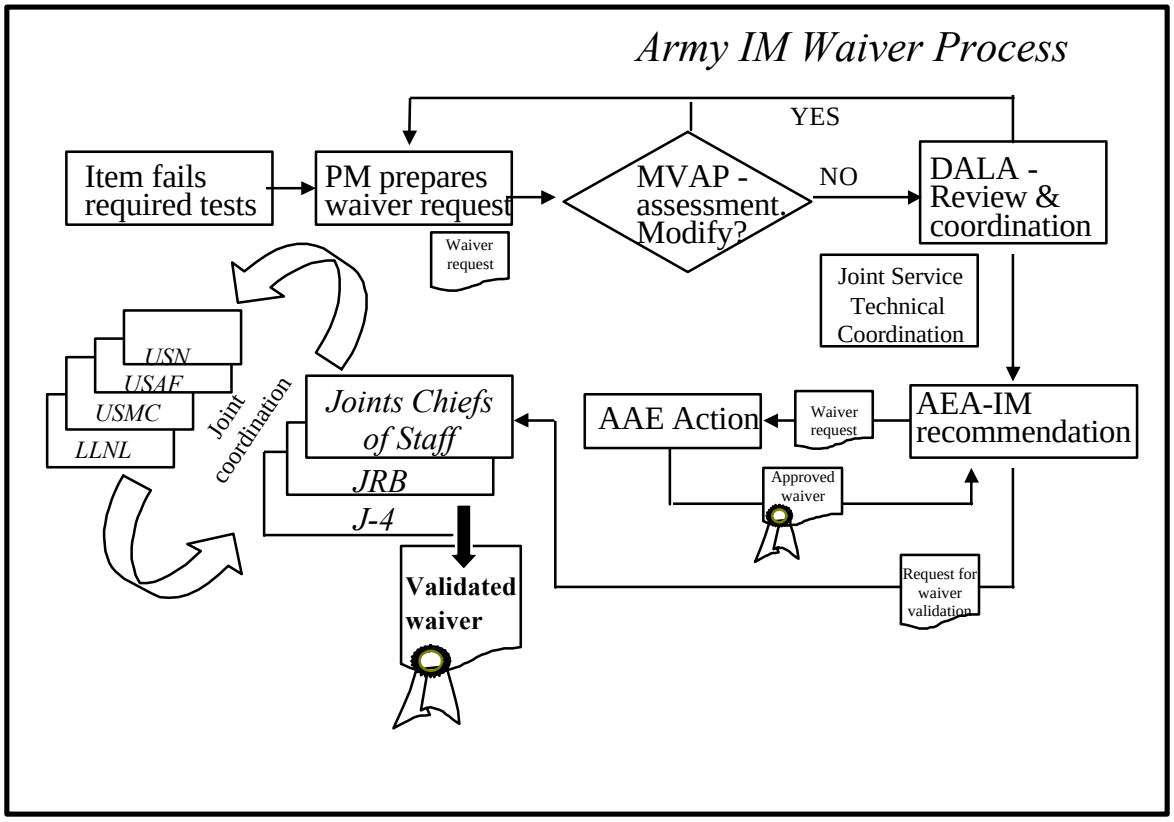


Figure XXV-5. IM Waiver Process

Annex 1

SAMPLE FORMAT
for
INSENSITIVE MUNITIONS/UNPLANNED STIMULI STRATEGY
& ASSESSMENT

INSENSITIVE MUNITIONS/UNPLANNED STIMULI STRATEGY AND
ASSESSMENT PLAN
FOR

_____ _____
Program Manager Date

_____ _____
Program Executive Officer Date

INSENSITIVE MUNITIONS/UNPLANNED STIMULI STRATEGY AND ASSESSMENT (IMS&A)

FORMAT AND REQUIREMENTS

1.0 INTRODUCTION

1.1 Purpose—Indicate whether this is a new submission or an update to an IMS&A previously submitted.

1.2 Background Describe the munitions history and the total number of munitions to be considered. Indicate when the munition/weapon will meet IM requirements, or reason for it's non-compliance.

2.0 PROGRAM MANAGEMENT Describe the IM Program Management Organization. Include codes and phone numbers. The use of “wiring diagrams” is encouraged.

3.0 SYSTEM DESCRIPTION—Briefly describe the munition/weapon system. The primary emphasis should be on the components that contain energetic materials. The use of figures and tables is encouraged.

4.0 IM THREAT HAZARD ASSESSMENT

4.1 Life Cycle—Describe the significant IM threats to the munition during its “cradle to grave” Life Cycle. Include both hostile and “friendly' threats in the assessment. Describe how the analysis was conducted (include references) and present a summary table of the results.

4.2 Munitions threat to platform—Describe the damage that could be inflicted to the platform as a result of violent weapon reaction when subjected to IM stimuli. Classified data should be attached as a separate addendum.

5.0 EXISTING DATA BASE

5.1 System/Component IM Test Results Describe the results of IM tests on components and all-up-rounds using the table shown in Figure XXV-A1. Describe the type of reaction that occurred in accordance with definitions of reaction in MIL-STD-2105A, applicable STANAG requirements or other references.

5.2 Analysis/Data from similar munition systems—Describe the results of IM tests on similar munitions and/or analysis that was conducted to arrive at IM assessment if actual test data is not available.

6.0 INSENSITIVE MUNITION/UNPLANNED STIMULI STRATEGY AND PLANS

6.1 Approach and Enabling Technologies—Describe the technology under consideration to correct the identified IM deficiencies. Contrast the selected technology and rationale with the competing alternatives under consideration. For the selected technology, describe how the results of IM tests will be analyzed and how the proposed solutions can be implemented. If a munition requires several technologies to meet all IM requirements, describe the process used to ensure that no adverse interactions will occur.

IM Test Results for

Status as of _____

	FAST COOK-OFF	SLOW COOK-OFF	BULLET IMPACT	SYMPATHETIC DET	FRAGMENT IMPACT	SHAPED CHARGE JET
COMPONENT	REACTION	REACTION	REACTION	REACTION	REACTION	REACTION
Note: Related safety tests may be added such as the Hazard Classification Assessments						

Figure XXV-A1 Insensitive Munitions Test Results Format

6.2 Technical Exit Criteria—Describe technical barriers which must be overcome and the specific performance, safety, and vulnerability requirements that must be demonstrated before the IM technology can be implemented into the system (e.g., shaped charge warhead performance, missile thrust).

6.3 Parallel Efforts—Describe efforts by other agencies (e.g., other services, industry, etc.) which are under consideration to correct the identified deficiencies. Describe the relationship, if any, between these efforts and efforts being considered in paragraph 6.1.

6.4 Schedule/Milestones—Provide a schedule and milestone chart depicting the significant events leading to IM compliance. The format in Figure XXV-A2 is acceptable.

ITEM	ACTIVITY	FY ____ (CFY)				FY ____ (CFY+1)				FY ____ (CFY+2)	FY ____ (CFY+3)	FY ____ (CFY+4)
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			

Figure XXV-A2 Insensitive Munitions Schedule/Milestones

7.0 RESOURCE REQUIREMENT'S

7.1 Funding Summary—Identify the funds required by Program Element/Project per year for the schedule to be successfully completed. Identify shortfalls and methods to be used to resolve funding deficiencies.

7.2 Resource Matrix—Provide a matrix identifying required resources by Program Element/Project by organization for each fiscal year through completion.

8.0 TRANSITION PLANS

8.1 Procurement Plan and Schedule—Provide current and/or projected procurement quantities and funding by fiscal year for the munition system.

8.2 Implementation Plan for Technology Transition—Provide a Technology Transition chart that shows the planned development and implementation of IM technology into the system acquisition strategy. The format shown in Figure XXV-A3 is acceptable.

8.3 Windows of Opportunity—Identify and discuss any opportunities for earlier integration of IM into the system or coupling of IM activities into ongoing or planned munition acquisition activities if a modification of the acquisition strategy was accomplished.

8.4 Organizational Agreements—Identify any formal or informal agreements (MOAs, MOUs, etc.) that exist with outside organizations. Names of organizations, effective dates and objectives should be included.

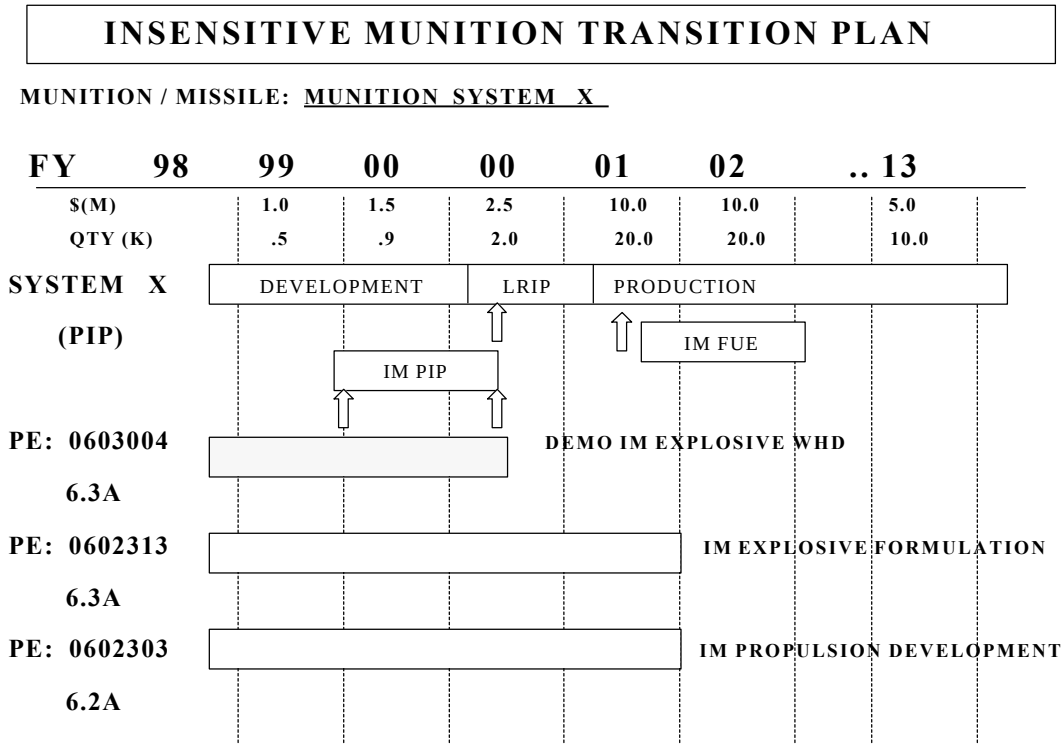


Figure XXV-A3 Insensitive Munitions Implementation Plan for Technology Transfer

Annex 2
FORMAT
for
MUNITIONS THREAT HAZARD ASSESSMENT

Reserved.

Annex 3
EXAMPLES
of
INSENSITIVE MUNITIONS WAIVER REQUEST
(Beginning Next Page)

E X A M P L E 1

WAIVER OF INSENSITIVE MUNITION REQUIREMENTS
SUMMARY

Munition:

Project/Program Manager:

Description:

The _____ is a _____ munitions/ammunition/missile. It consists of the following major components:

(List components).

Each of these components contains energetic materials applicable to IM requirements.

Reason for Waiver Request:

	Components	IM Requirements Failed	Reason for No Solution
1.	Propellant	Fast Cook-off, Fragment Impact	Technology is not available
2.	Fuzing Booster	Bullet Impact	Technology is not available
3.	Warhead	Fast Cook-off, Bullet Impact, Fragment Impact	Technology is not available

There are no practical solutions at this time for correcting the IM deficiencies of the _____ The technology is not available at this time for the formulation of a new propellant and explosive that would desensitize the cartridge. Although the item has demonstrated _____ deficiencies, it showed considerable IM improvement over its predecessor, the _____(See attached detailed rationale for waiver request.)

The _____ is used in the _____ weapon system and replaces the _____ missile/munition results in a considerable improvement in the munitions vulnerability characteristics.

_____
Office of the Project Manager

_____
Program Executive Officer

E X A M P L E 2

REQUEST FOR WAIVER
OF
INSENSITIVE MUNITIONS REQUIREMENTS

Munition:

Program Manager:

1. General:

This Insensitive Monitions Waiver Request applies to_____. The _____ contains certain components that do not meet some of the IM requirements and no practical solutions are available. A detailed discussion for each component failure is contained in section 2.

1.1 **System Description:**

(Describe the system. Use of figures and pictures is encouraged.)

1.1.1 The _____ contains the following energetic materials in the components specified.

A. Explosives: List components with explosive ingredients and percentage of composition.

B. Propellants: List components with propellant ingredients and percentage of composition.

C. Other Explosive Components with Energetic Compositions: List components with other energetic materials.

1.2 _____ IM Status:

The _____ has undergone IM-related testing in accordance with the attached IM Test Plan (enclosure 1). All testing has been completed and analyzed. The Munitions Vulnerability Assessment Panel (MVAP) has met to assess IM testing performed. Minutes of this meeting can be found as Enclosure 2.

2. Test Data:

Tables 1, 2, etc., describe Insensitive Munitions testing done on _____ and the results attained from each test. The Table (s) summarizes the test results by type of occurring reaction and a comparison to the _____, which is the predecessor munition. Further test data (i.e., reports, photographs, and video coverage) is available upon request.

2.1 Results/Conclusions:

2.1.1 Analysis of the tabulated results in tables 1, 2, etc., show that...

2.1.2 Analysis of testing performed on the warheads reveals a reaction more violent than required under the following IM tests: Fast Cook-off, Bullet Impact, Fragment Impact, and Shaped Charge Jet.

Address all other components in a similar manner.

2.2 Rationale for Waiver:

2.2.1 At this time it is not possible to correct the _____ deficiencies in order to pass IM test requirements. The technology does not yet exist to produce an insensitive (explosive, propellant, rocket motor, etc.) which would still meet all the performance requirements as stated in the Materiel Requirements Document (MRD) for the _____. Program scheduling and forthcoming milestones make it impossible to desensitize the _____ in a timely fashion. Attached at enclosure 3 is concurrence from (RDE Center) on technology unavailability.

2.3 **Correction of Deficiencies:** (Provide “get well” plan including plans for incorporating new technology, schedule and milestones.)

2.3.1 It is therefore requested this Insensitive Munitions interim waiver for _____ be approved.

Appendix A: Munition Threat Hazard Assessment.

Appendix XXVI
Simulation Support Plan Planning Methodology

Point of Contact: Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), ATTN: SAAL-DO, 2511 Jefferson Davis Highway, Suite 10100, Arlington, VA 22202-3911

References:
AR 5-11, "Management of Army Models & Simulations."
DA Pam 5-11, "Verification, Validation, & Accreditation of Army Models & Simulation."
Under Secretary of Defense (Acquisition and Technology) memorandum dated 16 March 1998, "Modeling and Simulation in Defense Acquisition"
ASA(RDA) and AMC memorandum dated 20 September 1996, "Modeling and Simulation Support of the Army Acquisition Process.
"Simulation Support Plan Guidelines," May 1997. Available from SAAL-DO or the internet at: www.sarda.army.mil/sard-zd/ssp.htm.

Introduction

The following is an outline that can assist in thinking through how Modeling and Simulation (M&S) tools can support an acquisition program. It allows the planner to start from a "big picture" perspective and work successively into the details of the actual data produced from the M&S that support acquisition program decision-making.

Getting Started

- PURPOSE (WHY)—Focus on how M&S support the Acquisition Strategy.
- BACKGROUND—M&S support takes into account the Acquisition Strategy, phases/milestones, contractors, costs, schedule, technology, policy, etc.
- SCOPE (HOW MUCH)—Extent M&S is integrated into acquisition program across phases and functions.
- OBJECTIVES (WHAT)—Information obtained from M&S to support more informed decision-making.
- SCHEDULE (WHEN)—When the M&S will be verified, validated, and accredited; executed; updated; etc.

Program Simulation Support Strategy

- CONCEPT—General approach to Simulation Support Strategy.
- PROCEDURES (HOW)—Exactly how M&S will be employed to support Analysis of Alternatives (AoA), risk reduction, design & engineering, test and evaluation, training, etc.
- DATA ANALYSIS/DECISION SUPPORT—How data will be employed to meet previously identified objectives.

Verification, Validation, and Accreditation (VV&A)

- Identify how VV&A will be established for each M&S. See AR 5-11 and DA PAM 5-11.

Management And Responsibilities

- RELATIONSHIPS (WHO)—Who (PM Office personnel, support activities, contractor) is responsible for developing, owning, VV&A, executing, and maintaining M&S.
- RESPONSIBILITIES (WHO does WHAT)—Articulate who is expected to accomplish which tasks and provide which resources.

Resources

- PROGRAM M&S—Identify actual models and simulations including descriptions, application, level of fidelity, High Level Architecture (HLA) compliance, Joint-Modeling and Simulation System (JMASS) compliance, etc.

- SUPPORT EQUIPMENT—Identify hardware-in-the-loop (HWIL), workstations, simulators, etc.
- SUPPORT SERVICES—Identify support to M&S activities, including VV&A, maintenance, configuration management, etc.
- SUPPORT FACILITIES—Identify needed facilities including Simulation Integration Laboratories, the Virtual Proving Ground (VPG), physical simulators test simulators, etc.

Appendix XXVII
Competitive Development Group Program

Point of Contact: Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), 2511 Jefferson Davis Highway, ATTN: SAAL-ZAC (Suite 10100), Alexandria, VA 22202-3911

References:
X-118C, Office of Personnel Management Qualification Standards Handbook
DoD 1400.20-1-M, Program for the Stabilization of Civilian Employee Policies, Procedures, and Programs Manual
Defense National Relocation Program Employees Handbook
Joint Travel Regulations
AR 25-400-2, “Modern Army Recordkeeping System (MARKS).”
AR 350-1, “Army Training and Education.”
AR 690-950, “Civilian Career Management.”
Civilian Personnel On-line (www.cpol.army.mil)
DA Pam 690-400, “Total Army Performance Evaluation System (TAPES).”
DA Memo 600-2, “Policies and Procedures for Active Component Officer Selection Boards,” November 26, 1993.

1. Introduction. These procedures are designed to be a detailed description of all actions and interrelationships required to ensure the Competitive Development Group (CDG) program is a success.

2. Program Description. The CDG program is a three-year developmental-training effort that offers high-potential, board-selected Corps Eligible (CE) Army personnel expanded training and leadership as well as other career development opportunities. CDG members will be centrally managed and assigned to centrally funded developmental positions throughout the acquisition community based upon their individual education, experience, and training needs. CDG members will receive priority access to cross-functional training and advanced leadership and management courses. Graduation from the program will entail successful completion of the requirements identified in an Individual Development Plan (IDP). CDG members will be accessed into the Army Acquisition Corps (AAC) upon graduation from the program or upon selection to a Critical Acquisition Position (CAP), whichever comes first.

3. Objectives. The objectives of the CDG program are to:

a. Competitively board-select the very best qualified applicants;

b. Broaden and reinforce the member's leadership and management skills;

c. Develop leaders representing a broad cross-section of Acquisition Career Fields (ACFs); and to

d. Expand acquisition experience by one or more ACF, organization, or command element.

4. Membership. Membership consisted of the 25 best-qualified applicants in the first year and 25 in the second year group. As an expanded program, membership will consist of up to 30 best-qualified applicants each year starting with year group 2000. With the selection of the third year group in the expanded program, the CDG program will reach its steady state of 90 members.

Members will be selected from those applicants who have been accepted as CEs prior to the CDG program application deadline, as well as current members of the AAC who can laterally transfer into Broadband III of the “Business Management and Technical Management Professional” career path of the Acquisition Workforce Personnel Demonstration Project. The members will be provided centrally managed education, experience, and training opportunities designed to provide career and leadership development opportunities in a structured, highly visible, three-year program.

Once a CDG program applicant is selected into the program, they are transferred onto the U.S. Army Acquisition Executive Support Agency (AAESA) Table of Distribution and Allowances (TDA) in an acquisition developmental position. Should a reduction-in-force occur while the member is on a CDG program assignment, the AAESA TDA will afford the Deputy Director, Acquisition Career Management (DDACM) greater authority to protect the CDG positions and members.

The CDG program has been developed by the Office of the DDACM and coordinated with the Functional Chief Representatives (FCRs) and commanders. CDG members are centrally managed by Proponency Officers from the Acquisition Career Management Office (ACMO) and Functional Acquisition Specialists (FASs) from the Acquisition Management Branch (AMB) of the U.S. Total Army Personnel Command (PERSCOM).

An IDP will be created for each CDG member. Its focus will be providing the member the education, experience, and training required to fulfill specific developmental needs. The IDP will be designed to achieve the Army Acquisition Corps' (AAC) Quality Achievement Factors (QAFs, Table XXVII-1) and to follow the Civilian Acquisition Career Model, Figure XXVII-1. This will make the CDG member more competitive for a CAP. Although promotions are not part of the program, the experience and exposure gained through participation in the program should substantially enhance the member's competitive standing among his peers. It is the intent of the DDACM that CDG members be prepared for promotion at any time during and at the conclusion of the three-year period.

5. Definition of Success. Successful completion of the CDG program entails achievement of the goals identified in each member's IDP over a three-year period or successfully competing for a promotion into a CAP.

6. Basic Program Structure. The best-qualified applicants (maximum of 30) will be selected by a PERSCOM board using Headquarters, Department of the Army (HQDA) policies and procedures as outlined in DA Memo 600-2. Upon selection, CDG members will be reassigned to positions on the AAESA TDA via a generic position description with duty assignments at specific locations based upon their developmental needs and current qualifications. (At this point, their reassignment is permanent. Their losing organizations are free to recruit to fill their vacated positions.) Civilian personnel support will be provided to each CDG member by the Civilian Personnel Operations Center (CPOC) or the Civilian Personnel Advisory Center (CPAC) supporting their assignment location.

7. Civilian Career Program Registration. Individuals selected for the CDG program should maintain current records in those career programs for which they are registered. During their developmental assignment, CDG members should continue to receive referral consideration through the Army Civilian Career Evaluation System (ACCES) if applicable to their career field. Individuals in the Engineers and Scientists (non-construction) or Quality and Reliability Assurance career programs are encouraged to register in the Department of the Army Civilian Announcement Distribution System (DACADS).

Table XXVII-1
Acquisition Corps Quality Achievement Factors Guide for Career Planning

FOR GRADE	CERTIFICATION LEVEL	EDUCATION	EXPERIENCE	TRAINING
GS-14	III in primary Acquisition Career Field (ACF) II in secondary ACF	BA/BS + 18 graduate semester hours Army Management Staff College OR Command and General Staff College OR equivalent	Leadership or management experience Operational or field level assignment* Two (2) MACOM, MSC or joint service assignments** HQDA or MACOM HQ ssignment	Management and leadership courses e.g., Organizational Leadership for Executives (OLE), Personnel Management for Executives (PME), etc. Continuing self-development training***
GS-15	III in primary ACF III in secondary ACF	MA/MS/MBA/MPA OR equivalent Continuing Education Units	Supervisory experience, e.g., division or branch chief Two (2) operational or field-level assign-ments* Two (2) MACOM, MSC or joint service assignments** HQDA or MACOM HQ assignment HQDA or OSD assignment	Executive career development courses e.g., Federal Executive Institute, Brookings, Harvard, Personnel Management for Executives II, etc. Continuing self-development training***
SES	III in primary ACF III in second ACF III in tertiary ACF	MA/MS/MBA/MPA + Continuing Education Units Senior Service College	Managerial/supervisory experience, e.g., director Two (2) operational or field-level assign-ments* Three (3) MACOM, MSC or joint service assignments** HQDA or MACOM HQ assignment HQDA or OSD assignment	Executive career development courses e.g., Federal Executive Institute, Brookings, Harvard, Personnel Management for Executives II, etc. Continuing self-development training***

*Operational/field-level assignments include assignment to or in support of PEO/PM offices, TRADOC System Management Offices, etc.

**Joint service assignments include acquisition positions in other DoD and Federal agencies, as well as private industry. Also included are assignments/details normally lasting 6-12 months to Source Selection Evaluation Boards and HQDA/MACOM study teams, “Tiger Teams,” and special projects. Assignments in PEO offices equate to MACOM assignments. Note that individuals should cross commands in selecting assignments for additional career broadening.

***Self-development training includes professional seminars, refresher courses, professional certificate programs, etc.

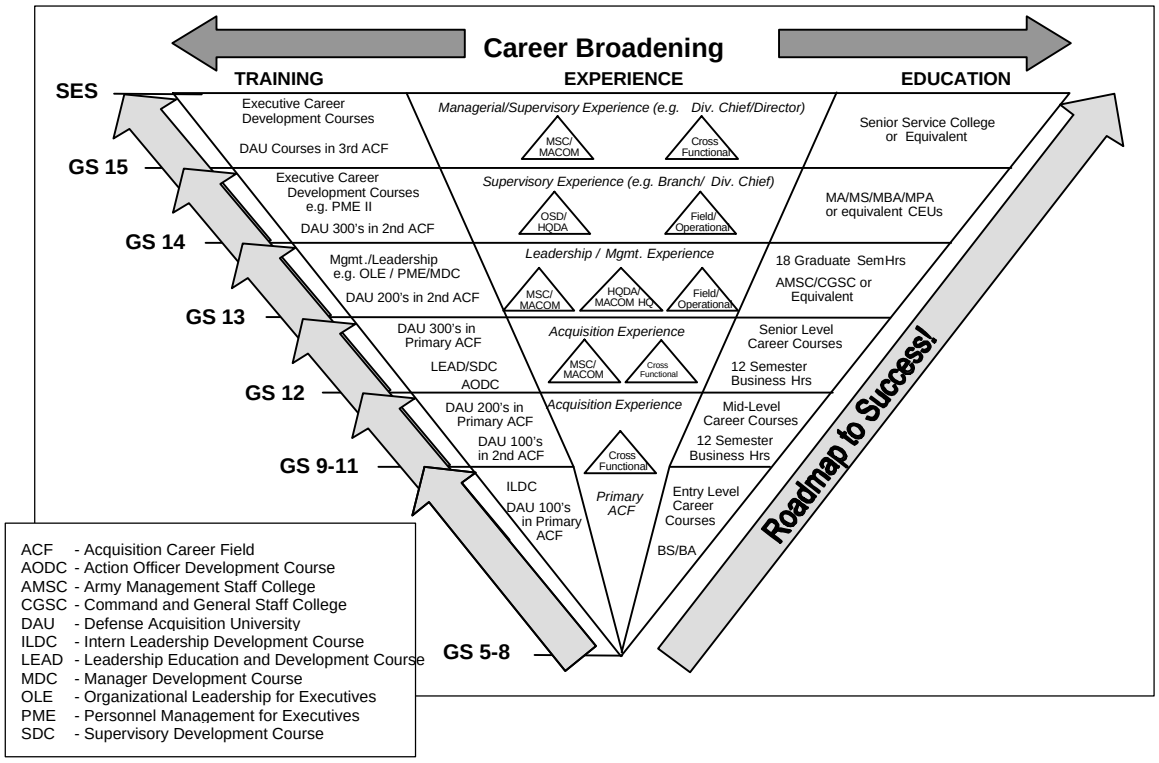


Figure XXVII-1. Civilian Acquisition Career Model

8. Civilian Personnel Administration.

a. **Manpower Spaces.** All CDG manpower slots will reside on the AAESA TDA. The Unit Identification Code (UIC) will be identified after the geographic location has been determined. The Department of Defense Civilian Personnel Management Service has confirmed that the Priority Placement Program (PPP) exception contained in DoD Manual 1400.20-1-M, Chapter 4, paragraph C2b is applicable to employees selected for the AAC CDG program. This exception applies to reassignment into and out of the CDG program.

b. Reassignment Actions.

(1) SF-52, Request for Personnel Action. The AAESA Personnel Management Division will prepare a memorandum for the DDACMs signature to the supervisor of the CDG member. The memorandum will provide signature authority to the immediate supervisor of the CDG program member for the SF-52. It will specify information for the SF-52 (to include UIC, paragraph and line number, organization title, and the appropriation code). The Personnel Management Division will coordinate with the AAESA Resource Management Division to ensure accuracy of the appropriation code data.

(2) The CDG member's immediate supervisor in the gaining organization will be responsible for the preparation and monitoring of the SF-52 as it proceeds through the personnel system at the local installation.

(3) Signatures on the SF-52. Part A, Block 5, Action Requested By will be signed by the CDG member's immediate supervisor in the gaining organization. The signature in Part A, Block 6, Action Authorized By will be dictated by local procedures at the gaining organization.

c. Job Offers. The civilian personnel specialist at the gaining CPAC will contact the CDG member to make the official job offer. Upon acceptance by the member, an Enter on Duty (EoD) date is established. In order for the CDG member to receive travel orders, the appropriate personnel must establish the EoD date. Otherwise, the CDG member risks losing some or all of the Permanent Change of Station and/or Defense National Relocation Program entitlements that he may be eligible to receive.

d. Permanent Change of Station (PCS)/Defense National Relocation Program (DNRP). If a CDG member is reassigned to a different geographic location, PCS and DNRP will be authorized and paid for by the Office of the DDACM in accordance with Volume II of the Joint Travel Regulation for PCS and the DNRP Handbook guidelines. At the time the CDG member accepts a government position requiring relocation, he will be responsible for requesting PCS/DNRP through the losing organization.

e. Time and Attendance Reporting. Time and attendance reporting is the responsibility of the immediate supervisor.

f. Rating Chain.

(1) In consonance with the Contribution-based Compensation Appraisal System (CCAS) or Total Army Personnel Evaluation System (TAPES) as applicable, Senior System Support Forms will be completed within 30 days of assignment to the position. Both the immediate supervisor and the CDG member will jointly complete the Support Form.

(2) For the CCAS method, the rating period will be from October 1, or date of assignment, through September 30. For employees under TAPES, rating periods follow the established rating cycles specified by TAPES or other locally set rating cycles.

(3) The member's immediate supervisor is his rater.

(4) The CDG member's senior rater will be the Acquisition Career Management Advocate (ACMA) responsible for the region the CDG is assigned. This responsibility is not to be delegated.

(5) CDG members should have a mid-point counseling session with their immediate supervisor and sponsor. If the CDG member is not meeting the objectives established in the IDP, the immediate supervisor and sponsor will notify the ACMO and counsel the employee, offering a reasonable opportunity for improvement. CDG members who do not improve after being given an opportunity to improve under a Performance Improvement Plan will be reassigned or removed from the program by the DDACM, in accordance with established civilian personnel regulations. The supervisor will coordinate with the CPAC, the Management-Employee Relations specialist, the Equal Employment Opportunity (EEO) Agency representative, the labor counselor, the sponsor, the Acquisition Career Management Advocate (ACMA), and the ACMO.

(6) Any supervisor of a detail or developmental assignment lasting over 120 days is required to provide the member's immediate supervisor an assessment of his performance during that period.

(7) The rater is responsible for forwarding the individual's rating and Support Form to the ACMO in a timely manner at the end of the rating period for review and approval.

(8) Performance awards are to be monetary only. Quality Step Increase awards are not supported. Upon approval by the Director of ACMO, the completed performance award package will be forwarded to AAESA's Resource Management Division. The Resource Management Division will provide fund certification and will forward it to the appropriate CPOC or CPAC. Other contribution-based or accomplishment awards such as on-the-spot cash awards are the responsibility of the host organization.

g. Competitive Area. All CDG members at a particular installation will be placed in one competitive area that is separate from any other organizational element at that installation.

h. Installation Commander Civilian Personnel and EEO Support. The CDG member is supported by the local CPOC or CPAC that services the gaining organization with respect to all personnel activities (for example, health benefits, CSRS, FERS, TSP, FEGLI, etc.) and the EEO (for example, POSH training, supervisory training, Affirmative Employment activities, etc.) These functions are to be documented in the MOA. The Acquisition Workforce Support Specialist (AWSS) located at various sites serves as a liaison between the ACMO, the installation commander, the ACMA, and personnel offices as appropriate.

9. Resource Management. All resource management issues associated with the CDG program are administered through AAESA's Resource Management Division. Funding for actions associated with the selection of CDG members, to include screening processes, boards, orientation program, and relocation actions, will be authorized by the Office of the DDACM.

a. Funding for Any Other Organization's Efforts. It is the responsibility of the Office of the DDACM to initiate action required for the contracting of services from other organizations, to include the procurement of orientation or training sites. The Resource Management Division will provide the required documentation and fund certification necessary to effect contracts or purchase orders as appropriate.

b. Funding for Selection Board Members. The Office of the DDACM will provide funding and travel orders for selection board members identified for the CDG program board.

c. Funding for CDG Member's PCS/DNRP. The Office of the DDACM will provide management oversight for costs associated with PCS entitlements. The DNRP will be awarded to CDG members who are relocating in accordance with the eligibility criteria outlined in the DNRP Employee Handbook. Fund citations and certifications for all PCS travel orders and/or DNRP expenses will be provided by the Office of the DDACM

d. Temporary Duty Travel (TDY) for Orientation/Training. The Office of the DDACM will provide funding for TDY travel associated with training developed and/or offered solely for members of the CDG program.

e. Defense Acquisition University (DAU). Course funding for mandatory and desired training for members of the CDG program will be the responsibility of the DAU. Administrative documentation will be processed through the U.S. Army Research, Development, and Acquisition Information Systems Activity (RDAISA).

f. Non-DAU Training. All tuition and associated costs for training and education documented on CDG members' IDPs as program specific will be funded, if approved, through the Office of the DDACM.

g. Intra-service Support Agreements (ISSA). Time and attendance, and all other civilian personnel payroll actions will be administered at the duty station. Wherever applicable, ISSAs or appropriate MOA will be established between installation commanders and AAESA's Personnel Management Division through the Office of the DDACM.

10. Program Execution.

a. Application Process.

(1) Application Pool. Members will be selected from Army personnel who have been accepted as CEs prior to the CDG program application deadline, as well as current members of the AAC who can be laterally transferred into a Broadband III position for the “Business Management and Technical Management Professional” career path within the Acquisition Workforce Personnel Demonstration Project. Qualified applicants may apply and compete annually, without restriction, for membership in the CDG program. A new application will be required for each year an applicant wishes to compete for membership.

(2) Application Process. Application requirements are posted on the Army Acquisition Homepage, sent out as a PERSCOM message, and sent to the MACOMs and acquisition commands via the ACMAs and AWSSs, etc. Applications are submitted to AMB. A deadline is established for AMB's receipt of completed application packages. No application packages are accepted after the deadline.

(3) Application Review/Validation. Application packages are reviewed for completeness by AMB. Individual board files are created for each applicant to be used by the CDG selection board. File preparation consists of recording and tracking all applications; printing clean ACRBs; and verifying that all files include all required documents (an ACRB, previous performance appraisals, mobility statement, Senior Rater Potential Evaluation (SRPE), and any other documents that may be identified in future announcements).

(4) Acquisition Civilian Record Brief (ACRB) Update. As part of the application procedures, applicants are required to update their ACRBs, correcting inaccurate information and adding any missing information. Corrected ACRBs are validated by requiring the applicant to sign the bottom indicating those corrections and/or changes are true and accurate. Corrected ACRB information is entered into the DACM Database via ADRS by the ACMO. Corrected ACRB information is entered into the DACM database and a new ACRB is generated, placed into the applicant's file, and provided to the board for evaluation.

b. Selection Board Process.

(1) Convening Authority. The convening authority for the CDG program selection board is the DDACM. The DDACM authorizes the convening and scheduling of the board, and approves or disapproves board recommendations.

(2) Board Membership. Nominations for board members are obtained from the ACMO and Functional Chief Representatives. Nominated board members should be representative of the acquisition functional areas which possess the various experiences and skills applicable to the acquisition workforce. There should be both military and civilian representation from various commands, headquarters, and field organizations. The board members must be at least of the rank/grade of Lieutenant Colonel/GS-14 or equivalent. The chairperson must be at least of the rank/grade of Colonel/GS-15 or equivalent. PERSCOMs AMB will do final selection of the nominated board members. AAESA's Resource Management Division provides the funding citations for TDY along with reimbursement instructions required for board members.

(3) Board Execution. An official memorandum is sent from the Office of the DDACM to Commander, PERSCOM requesting that AMB convene the CDG program Selection Board.

(*a*) AMB schedules the board room with the Secretariat and confirms board dates.

(*b*) PERSCOM establishes board procedures and processes. A Memorandum of Instruction (MOI) is drafted by PERSCOM and staffed with the Office of the General Counsel, the Office of the Assistant Secretary of the Army (Manpower and Reserve Affairs (ASA(M&RA)) Civilian Personnel Policy, the Equal Employment Opportunity Agency, and the ACMO and is approved by the DDACM. The MOI will be distributed to all selected board members on the day the board convenes. It will provide them with instructions on how the board will be conducted as well as defining their roles and responsibilities as board members.

(*c*) The board is conducted to DA Secretariat standards (DA Memo 600-2) under the authority of PERSCOM. PERSCOMs AMB Personnel Management Specialists assure adherence to the Secretariat's board procedures.

(*d*) The CDG program selection board will base its decisions on the following documents: the ACRB; the six most recent annual performance appraisals; the Senior Rater's Potential Ranking Factor Form; the SRPE form; the DA Form 2302; and any other information requested as part of the application package.

(*e*) The selected board members will evaluate the entire record of each applicant to assess his potential to assume a leadership position within the AAC. The board reviews an applicant's file against a predefined set of criteria. These criteria are outlined in the MOI to the board. A standard part of the board member's charter is to compare each record to the established criteria, recommend selection of up to the 30 best-qualified individuals for the CDG program, produce an order-of-merit list, and prepare a detailed after-action report highlighting the collective observations, concerns, and recommendations with regard to the selection process. The recommendation of the board is forwarded through command channels to the DDACM for final approval.

(*f*) AMB will then prepare a detailed analysis of the qualifications of those selected. The analysis will be forwarded to ACMO for distribution to the Army Acquisition Workforce (AAW). This permits future candidates to see the qualifications of those selected as well as providing other information of interest to the workforce relative to the program and the process.

(*g*) The official request for an individual's release date from their current assignment will be made by the servicing civilian personnel activity.

(4) Senior Rater Potential Evaluation. The SRPE initiative was developed to provide an evaluation of leadership potential for the acquisition civilian workforce. It is similar to that which is available for military personnel. In completing this evaluation, senior raters are requested to rate the leadership potential of their employees using the specified leadership competencies.

(5) Notification of Selectees. CDG program selectees will be notified of their selection by letter after the board results are approved. At this time the selectee has the opportunity to accept or decline CDG membership prior to initiation of the placement process.

c. Generic Developmental Assignment Positions. Generic developmental assignment positions for CDG members have been established on AAESA's TDA, with funding provided by the Office of the DDACM. The ACMO will request developmental assignment profiles from the FCRs and ACMAs. When developing a CDG program assignment profile, the ACMA or FCR must ensure that potential supervisors are aware of the CDG program and its objectives.

(1) Developmental Position Utilization. ACMAs/FCRs will recommend developmental assignments to the DDACM. The assignments will best capitalize on the CDG members' developmental needs. Once in an assignment, members can be detailed to a set of duties that may be at another location and/or within another functional area.

(2) Developmental Assignment Priority. Ideal CDG assignment profiles will be those that make an individual more competitive for a CAP. Each CDG member will have a unique “ideal” assignment. A “preferred” position is one that is located in the member's local commuting area where the member's sponsor is a senior military or civilian supervisor at the rank/grade of Colonel/GS-15 or equivalent.

(3) Supervisors for Developmental Positions. Supervisors for developmental positions must be ACC members and be certified Level III in the ACF required by their position.

d. Competitive Development Group Orientation.

(1) Purpose. CDG members will receive an orientation prior to their placement into a developmental position. The purpose of the orientation is to provide detailed education, training, and career development information to the CDG member. The intent is to provide the framework for developing cross-functional and

multidisciplinary acquisition leaders capable of meeting the challenges of the twenty-first century. Supervisors, sponsors and FCRs (or their designated representatives) from the ACFs will also be invited to attend.

If a developmental assignment involves a PCS, the member may attend the orientation on a TDY basis prior to their PCS move. TDY will be authorized for all selectees and their supervisors at the gaining organization.

(2) Objectives.

(*a*) Review and finalize a detailed IDP for each CDG member to complete during the three-year program. The IDP will outline the education, experience, and training designed to make the member more competitive for selection to a CAP.

(*b*) Provide the member, his immediate supervisor, and his sponsor with the CDG program goals.

(*c*) Provide CDG supervisors with an understanding of their individual roles and responsibilities.

(*d*) Provide the member and his supervisor with an understanding of how the various offices within the DACMs organizational structure contribute to the acquisition career management of each individual.

(*e*) Provide the member and his immediate supervisor an understanding of the roles of the FCRs, the FASs, and the Proponency Officers as well as the roles and responsibilities of the ACMA and AWSS at their location.

(*f*) Provide reference materials regarding available education, development opportunities, training, and other subjects of interest.

(3) Location and length. The orientation will be approximately three days in length and will be held in the National Capitol Region (NCR).

(4) IDP Development. Detailed information regarding the CDG member's previous education, experience, and training will be used to develop an IDP. This is a joint effort by the Proponency Officers in the ACMO, the FASs, the FCRs, the members, their immediate supervisors, and their sponsors (IDP development team). This team of subject matter experts will focus on identifying the appropriate types of work experiences that the member needs to participate in during their three-year developmental assignment. The assignments identified should produce the meaningful cross-functional and multi-disciplinary competencies needed to meet the QAFs and develop our future acquisition leaders. The IDP will be developed using the following methodology:

(*a*) Recommended assignments will be recorded on the IDP along with the identified education and training.

(*b*) During the orientation, the draft IDP will be supplemented with training courses identified by the CDG member and his supervisor. The CDG member, his immediate supervisor, the Proponency Specialist, the FAS, and an FCR representative will review the IDP and make any necessary adjustments.

(*c*) Once the orientation has adjourned, the ACMO will review the IDPs and return them to the member and his gaining immediate supervisor within 30 days. The IDP is not considered final until the member, his gaining immediate supervisor, his Proponency Specialist and/or FAS, and an FCR representative have signed it.

(*d*) The finalized IDP will become a living document that may be revised or updated as required during the developmental assignment with coordination through the ACMO. The CDG member and his gaining immediate supervisor will maintain it. A copy will be furnished to the CDG member's FAS for inclusion in the individual career management file. The FAS will facilitate and monitor IDP completion by the CDG member.

e. Program Completion.

(1) Successful completion of the CDG program entails achievement of the goals identified in each member's IDP over a three-year period or successfully competing for a promotion into a CAP.

Upon completion of the program, CDG members who have not received a promotion to a CAP, but have successfully completed their IDP objectives, will be accessed into the AAC and laterally reassigned to a position fulfilling one or more of the following requirements:

(*a*) Greater responsibility in an ACF in which they have served prior to the CDG program;

(*b*) A position in an ACF for which they have become qualified during the CDG program;

(*c*) Any position fulfilling a short or long-range goal on his IDP;

(*d*) A position at a different echelon, organization, or command.

(2) The ACMO, Proponency Officers, FASs, and FCRs will assist CDG members in identifying follow-on assignments.

(3) Career Program Registration. CDG members from the Comptroller, Supply Management, Materiel Maintenance Management, Transportation Management, Contracting, Quality and Reliability Assurance, or Information Mission Area Career Programs (CPs 11, 13, 17, 24, 14, 15, or 34 respectively) should ensure they have a current ACCES registration identifying their experience and desired job categories and locations. Individuals in the Engineers and Scientists (non-construction) career programs are encouraged to register in DACADS. Once entered into the DACADS system, CPOCs and/or CPACs mail vacancy announcements to individuals whose data matches the occupational series, specialty or function, or other appropriate screening factors.

12. Maintaining the CDG Program. Membership for the first two CDG year groups (fiscal years [FY] 1997 and 1998) consisted of the 25 best-qualified applicants. The third year group (FY99) will consist of up to 30 individuals. Upon selection of the year group FY01, the CDG program will reach its steady state of 90 members. This membership number will be evaluated periodically.

a. Meetings. Three or four formal meetings between the CDG members and the DDACM/ACMO will be held annually. These meetings will be used to gather feedback on the CDG program and provide members with the latest CDG/acquisition information. In conjunction with subsequent CDG orientations, all current CDG members will be invited back to the NCR for an annual meeting. This will provide the members the opportunity to provide feedback as a whole, and to learn about obstacles encountered and overcome from other CDG members.

b. DDACM Visits. Once or twice annually the DDACM will visit the AAW and AAC members at various locations across the country. During these visits the DDACM and members of the ACMO will meet with CDG members.

c. Field Trip. CDG members will be sent on a group field trip or group training session once per year for leadership training.

13. Program Evaluation. Early identification of issues and problems, as well as successes, is paramount to the success of the CDG program. Feedback from the members, their immediate supervisors and sponsors, ACMAs, FCRs, and all others involved in the program, is a valuable tool that can be used for program evaluation. CDG members will have a direct communication link to the ACMO through their assigned FAS and the CDG list server on the Internet.

a. Board Execution. Lessons learned from the board process and the Selection Board After-action Report will be used to identify problems and institute solutions to improve the board selection process.

b. Orientation. At the CDG orientation, feedback will be requested from all of the participants. This will include requesting comments/suggestions on the application process, the placement process and results, and the orientation itself. The results will be used to evaluate the processes up to that point and to institute changes as deemed necessary by the ACMO.

c. Quarterly Survey. After completion of the orientation, the ACMO will poll the CDG members, their immediate supervisors and sponsors, and the FCRs to determine developmental progress, issues, concerns, and lessons learned. It will survey IDP progress and will address any impediments encountered to achieving IDP goals. This feedback will be used by the FASs and Proponency Officers to evaluate whether or not the CDG member's new organization is supportive of the program. The feedback will also be used to establish a communications channel for any and all issues that might arise. In addition to the quarterly survey used during the CDG assignment, another survey will be used to query the CDG graduates and their new supervisors one-year after completion of the three-year program. The ACMO will use the surveys to determine the effectiveness of the CDG program and to make necessary changes to it.

Appendix XXVIII
Glossary

TERMS

Acquisition Phase

All the tasks and activities needed to bring the program to the next major milestone occur during an acquisition phase. Phases provide a logical means of progressively translating broadly stated mission needs into well-defined system-specific requirements and ultimately into operationally effective, suitable, and survivable systems. An example of an acquisition phase is Program Definition and Risk Reduction.

Acquisition Program

A directed, funded effort designed to provide a new, improved or continuing weapons system or AIS capability in response to a validated operational need. Acquisition programs are divided into different categories that are established to facilitate decentralized decision-making, and execution and compliance with statutory requirements.

Advanced Procurement (Long Lead Items)

A pre-approved exception to the full funding policy that allows procurement of long lead-time components, material, parts, and effort in a fiscal year before that in which the related end item is to be procured.

Authority provided in an appropriations act to obligate and disburse during a fiscal year before that in which the related end item is procured. The funds are added to the budget authority for the fiscal year and deducted from the budget authority of the succeeding fiscal year. Used in major acquisition programs for advance procurement of components whose long-lead-time require purchase early in order to reduce the overall procurement lead-time of the major end item. Advance procurement of long lead components is an exception to the DoD “full funding” policy and must be part of the President's budget request.

Affordability

The degree to which the life-cycle cost of an acquisition program is in consonance with the long-range investment and force structure plans of the Department of Defense or individual DoD Components. Affordability procedures establish the basis for fostering greater program stability through the assessment of program affordability and the determination of affordability constraints.

Automated Cost Estimating Integrated Tools (ACEIT)

The new standard Army automated framework/spreadsheet designed to increase the productivity of cost analysis work. ACEIT automates the detailed, tedious costing functions allowing the analyst more time to concentrate on the methodology and perform analysis; provides automated assistance in developing documentation of the estimate; and supplies the latest inflation indices for all services and other government agencies (e.g., each year updated inflation indices are distributed throughout the Army via each ACEITs local point of contact).

The ACEIT system includes:

- Cost Estimating Module—ACE
- Methodology Knowledge Base
- Automated Cost Data Base—ACDB provides both the capability to store and recall data submitted to the government in an electronic image of the Contractor Cost Data Reporting (CCDR) or Cost Performance Report (CPR); and, the capability to search and retrieve mapped and normalized cost information.
- Reference Libraries
- Cost Analysis Statistics Package—COSTAT is a built in cost analysis statistical package specifically for cost estimators

Automated Information System (AIS)

A combination of computer hardware and software, data, or telecommunications, that performs functions such as collecting, processing, transmitting, and displaying information. Excluded are computer resources, both hardware and software, that are: physically part of, dedicated to, or essential in real time to the mission performance of weapon systems. (DoD 5000.2-R)

Block Modification

A block modification is a grouping of modifications for the purpose of achieving economies in funds, manpower, equipment and/or time to enhance configuration management. A block modification includes several modifications in engineering, procurement and/or application that are managed as a single modification.

Capstone Requirement Document

A Capstone Requirement Document (CRD) may be used for a "system of systems" approach. The CRD is a requirements management document that sets common standards and requirements across a function or mission area. It ensures any materiel fielded within that function or mission area is interoperable and maximizes the use of common resources. A CRD cannot be used to establish a materiel acquisition program or funding line. Authority for these activities is the individual system ORD.

Clothing and Individual Equipment (CIE)

A collective term that includes personal clothing, optional clothing, organizational clothing, and individual equipment that is not an integral part of the design and operation of major equipment.

Clothing Bag

All Army uniforms and accessories contained in the initial issue clothing allowance contained in Common Table of Allowances (CTA) 50-900 for enlisted soldiers. Clothing bag items are furnished to enlisted members entitled to an initial issue of clothing in accordance with AR 700-84.

Commercial Item

Any item, other than real property, that is of a type customarily used for nongovernmental purposes and that: (1) has been sold, leased, or licensed to the general public; or, (2) has been offered for sale, lease, or license to the general public; or any item that evolved through advances in technology or performance and that is not yet available in the commercial marketplace, but will be available in the commercial marketplace in time to satisfy the delivery requirements under a Government solicitation. Also included in the definition are services in support of a commercial item, or a type offered and sold competitively in substantial quantities in the commercial marketplace based on established catalog or market prices for specific tasks performed under standard commercial terms and conditions; this does not include services that are sold based on hourly rates without an established catalog or market price for a specific service performed.

Critical Program Information (CPI)

Information, technologies, or systems that, if compromised, would degrade the combat effectiveness, shorten the expected combat-effective life of the system, or significantly alter the program direction. This includes classified military information or unclassified controlled information about such programs, technologies, or systems. The CPI is finite, definable and is limited as possible.

Defense Acquisition Deskbook (DAD)

The Defense Acquisition Deskbook is an automated repository of information that consists of an electronic Desk Reference Set, a Tool Catalog, and a Forum for the exchange of information. The Reference Set organizes information into two main categories: mandatory guidance and discretionary information.

Defense Research Facility

DoD facility which performs or contracts for the performance of (A) basic research; or (B) applied research known as exploratory development.

Electromagnetic Compatibility (EMC)

The ability of systems, equipment, and devices that utilize the electromagnetic spectrum to operate in their intended operational environments without suffering unacceptable degradation, or causing unintentional degradation because of electromagnetic radiation or response. It involves the application of sound electromagnetic spectrum management, system, equipment and device design configuration that ensures interference-free operation; and clear concepts and doctrines that maximize operational effectiveness.

Electromagnetic Environmental Effects (E3)

The impact of the electromagnetic environment upon the operational capability of military forces, equipment, systems, and platforms. It encompasses all electromagnetic disciplines, including electromagnetic compatibility/interference; electromagnetic vulnerability; electromagnetic pulse; hazards of electromagnetic radiation to personnel, ordnance, and volatile materials; and natural phenomena effects of lightning and p-static.

Electromagnetic Interference (EMI)

Any disturbance interrupting, obstructing, or otherwise degrading or limiting the effective performance of electronics or electrical equipment. It can be induced intentionally, as in EW, or unintentionally, through spurious emissions/responses, intermodulation products, or the like. (Joint Pub 1-02)

Electromagnetic Spectrum

The range of frequencies of electromagnetic radiation from zero to infinity. (Joint Pub 1-02)

Electronic Warfare (EW)

Any military action involving the use of electromagnetic energy or directed energy to control the electromagnetic spectrum or to attack the enemy. (Joint Pub 1-02)

Frequency Assignment

Authorization to use a specific frequency under specified conditions.

Government Furnished Software

A Government furnished item in the form of software (computer programs, data definitions, and/or populated databases, as appropriate) and frequently with related user and support documentation/information. GFS is a form of software reuse; GFS software may originate from various sources, such as development from another project, government-developed software, and is now owned by the Government. However, Commercial Off-the Shelf-(COTS) Software, even if provided by the Government or another acquirer, is not categorized as GFS, and is usually categorized as COTS software because of its essential “Commercial” nature/source and vendor support and updates. (ref DOD 5000.2-R, 4.3.5 (1). (“GOTS” software; Government Off-the Shelf Software, is a term that is loosely defined and used, but sometimes is meant to be equivalent to GFS.)

Health Hazards

Conditions that create significant risks of death, injury, or acute chronic illness, disability, and/or reduced job performance of personnel who produce, test, operate, maintain, or support the system.

Horizontal Technology Integration (HTI)

The application of common technology across multiple systems or items to improve the warfighting capability of the force. It is a modernization, requirements and acquisition process in which technology is simultaneously integrated into different weapon systems.

Joint Force Commander

CINC or JTF commander designated to conduct an operation by NCA.

Joint Program

Any acquisition system, subsystem, component, or technology program that involves a strategy that includes funding by more than one DoD Component during any phase of a system's life cycle.

Key Performance Parameter (KPP)

That capability or characteristic so significant that failure to meet the threshold can be cause for the concept or system selection to be reevaluated or the program to be reassessed or terminated. KPPs are extracted from the ORD and included in the APB.

Low Rate Initial Production (LRIP)

The objective of this activity is to produce the minimum quantity necessary to: provide production configured or representative articles for operational tests, establish an initial production base for the system; and permit an orderly increase in the production rate for the system, sufficient to lead to full-rate production upon successful completion of operational testing.

Major Automated Information System (MAIS) Acquisition Program

An AIS acquisition program that is (1) designated by ASD(C3I) as a MAIS, or (2) estimated to require program costs in any single year in excess of 30 million in fiscal year (FY) 1996 constant dollars, total program costs in excess of 120 million in FY 1996 constant dollars, or total life-cycle costs in excess of 360 million in FY 1996 constant dollars. MAISs do not include highly sensitive classified programs (as determined by the Secretary of Defense). For the purpose of determining whether an AIS is a MAIS, the following shall be aggregated and considered a single AIS: (1) the separate AISs that constitute a multi-element program; (2)

the separate AISs that make up an evolutionary or incrementally developed program; or (3) the separate AISs that make up an a multi-component AIS program.

Major Defense Acquisition Program (MDAP)

An acquisition program that is not a highly sensitive classified program (as determined by the Secretary of Defense) and that is: (1) designated by the Under Secretary of Defense (Acquisition and Technology) (USD(A&T)) as an MDAP, or (2) estimated by the USD(A&T) to require an eventual total expenditure for research, development, test and evaluation of more than 355 million in fiscal year (FY) 1996 constant dollars or, for procurement, of more than 2.135 billion in FY 1996 constant dollars.

Major Milestone

A major milestone is the decision point that separates the phases of an acquisition program. MDAP milestones include, for example, the decisions to authorize entry into the engineering and manufacturing development phase or full rate production. MAIS milestones may include, for example, the decision to begin program definition and risk reduction.

Major System

A combination of elements that shall function together to produce the capabilities required to fulfill a mission need, including hardware, equipment, software, or any combination thereof, but excluding construction or other improvements to real property. A system shall be considered a major system if it is estimated by the USD(A&T) to require an eventual total expenditure for RDT&E of more than 135 million in FY 1996 constant dollars, or for procurement of more than 640 million in FY 1996 constant dollars, or if designated as major by the DoD Component Head.

Milestone Decision Authority (MDA)

The individual designated in accordance with criteria established by the USD(A&T), or by the ASD(C3I) for AIS acquisition programs, to approve entry of an acquisition program into the next phase.

Modification

The alteration, conversion, or modernization of an end item of which changes or improves the original purpose or operational capacity in relation to effectiveness, efficiency, reliability or safety of that item. This includes conversions, field fixes, retrofits, remanufacture, redesign, upgrades, extended service programs, engineering changes, software revisions, System Enhancement Program (SEP), Service Life Extension Program (SLEP), Product Improvement Program (PIP), Pre-Planned Product Improvement (P3I) and technology insertions.

Modified Commercial Item

Any item with modifications of a type customarily available in the commercial marketplace or minor modifications of a type not customarily available in the commercial marketplace made to meet Federal Government requirements. Such modifications are considered minor if the change does not significantly alter the non Governmental function or essential physical characteristics of an item or component, change the purpose of the process. Factors to be considered in determining whether a modification is minor include the value and size of the modification and the comparative value and size of the final product. Dollar values and percentages may be used as guideposts, but are not conclusive evidence that a modification is minor.

Mission Critical

A system whose operational effectiveness and operational suitability are essential to the successful completion/outcome of the current or subsequent combat action. The loss of the system could result in an unfavorable outcome of the combat action. Soldiers who perform their primary or secondary functions on the battlefield use the system.

Non-Developmental Item (NDI)

(1) Any previously developed item of supply used exclusively for governmental purposes by a Federal Agency, a State or local government, or a foreign government with which the United States has a mutual defense cooperation agreement; (2) any item described in (1) that requires only minor modification or modifications of a type customarily available in the commercial marketplace in order to meet the requirements of the procuring department or agency; or (3) any item of supply being produced that does not meet the requirements described in (1) or (2) solely because the item is not yet in use.

Objective

The objective value is that desired by the user and which the PM is attempting to obtain. The objective value could represent an operationally meaningful, time critical, and cost-effective increment above the threshold for each program parameter. Program objectives (parameters, and values) may be refined based on the results of the preceding program phase(s).

Optional Uniforms

A uniform or clothing item which the individual soldier is not required to own or wear, but may be worn at the individual's option as prescribed by AR 670-1. These items are not part of the initial or supplemental issue. These items are not centrally procured, but may be purchased through the Army Air Force Exchange Service (AAFES) or authorized commercial sources. Examples include the black pullover sweater and the black windbreaker.

Organizational Clothing and Individual Equipment (OCIE)

Clothing and equipment expressly developed for military personnel use in the field during combat or training. Within prescribed limits these items may also be used in garrison. These items are normally worn or carried by an individual soldier to support mission performance, and do not include items that are part of a larger or separate system. These items are issued to soldiers on a loan basis under Common Table of Allowances (CTA 50-900, CTA 50-909, CTA 50-970) and remain the property of the organization. These items include, but are not restricted to, cold weather clothing; combat vehicle crewman; aircrew; desert; nuclear, biological, and chemical (NBC) protective suits; footwear; gloves; both medical and food service duty white uniforms (DWU); field packs and other load bearing equipment; canteens; helmets; individual cooling vests; and protective eyewear.

Pre-Planned Product Improvement (P3I)

Planned future evolutionary improvement of developmental systems for which design considerations are accomplished during development to enhance future application of projected technology. Includes improvements planned for ongoing systems that go beyond the current performance envelope to achieve a needed operational capability.

Risk Management

The process of selecting and implementing countermeasures to achieve an acceptable level of risk at an acceptable cost. Risk management encompasses identification, mitigation, and continuous tracking and control procedures that feed back through the program assessment process to decision authorities.

Significant Contracts

Include research, development, test, and evaluation contracts and subcontracts with a value of $70 million or more or procurement contracts and subcontracts with a value of $300 million or more (in FY 1996 constant dollars). (DoD 5000.2-R)

Spectrum Management

Planning, coordinating, and managing joint use of the electromagnetic spectrum through operational, engineering, and administrative procedures, with the objective of enabling electronic systems to perform their functions in the intended environment without causing or suffering unacceptable interference.

Telecommunications

Any transmission, emission, or reception of signs, signals, writings, images, sounds, or information of any nature by wire, radio, visual, or other electromagnetic systems. (Joint Pub 1-02)

Threshold

The threshold value is the minimum acceptable value that, in the user's judgment, is necessary to satisfy the need. If threshold values are not achieved, program performance is seriously degraded, the program may be too costly, or the program may no longer be timely. The spread between objective and threshold values shall be individually set for each program based on the characteristics of the program (e.g., maturity, risk, etc.).

Training Aids Devices Simulators and Simulations (TADSS)

TADSS are developed and acquired to support training at the unit and/or Combat Training Centers (CTCs) and within the institutional training base. TADDS are categorized as either system or non-system. System TADSS are designed for use with a system, family of systems or item of equipment, including subas-

semblies and components. They may be stand-alone, embedded, or appended. Non-system TADSS are designed to support general military training and non-system specific training requirements.

ACRONYMS

10 USC
Title 10 United States Code

AAB
Acquisition Accession Board

AAC
Army Acquisition Corps

AAE
Army Acquisition Executive

AAESA
Army Acquisition Executive Support Agency

AAFES
Army Air Force Exchange Service

AAIP
Army Acquisition Intern Program

AAN
Army After Next

AAO
Army Acquisition Organization

AAR
Association of American Railroads

AATAP
Army Acquisition Tuition Assistance Program

AAUB
Associate Army Uniform Board

AAW
Army Acquisition Workforce

ACAT
Acquisition Category

ACCES
Army Civilian Career Evaluation System

ACEIT
Automated Cost Estimating Integrated Tools

ACF
Acquisition Career Field

ACIC
Army Counterintelligence Center

ACL
Acquisition Career Level

ACM

Acquisition Career Management or Advanced Concept Manager

ACMA

Acquisition Career Management Advocate

ACMO

Acquisition Career Management Office

ACP

Army Cost Position

ACPB

Army Acquisition Career Program Board

ACRB

Acquisition Civilian Record Brief

ACT

Advanced Concept and Technology

ACTD

Advanced Concept Technology Demonstration

ACTD ID

Advanced Concept Technology Demonstration Implementation Directive

ACTD MP

Advanced Concept Technology Demonstration Management Plan

ACTEDS

Army Civilian Training, Education and Development System

ADAP

Army Designated Acquisition Program

ADCSOPS-FD

Assistant Deputy Chief of Staff for Operations and Plans, Force Development

ADM

Acquisition Decision Memorandum

ADO

Army Digitization Office

ADPE

Automated Data Process Equipment

ADRS

Acquisition Data Review System

AEA

Army Enterprise Architecture

AEA-IM

Army Executive Agent for Insensitive Munitions

AESAP

Army Environmental Strategy Action Plan

AHWG

Ad Hoc Working Group

AIS
Automated Information System

AMB
Acquisition Management Branch

AMC
Army Materiel Command

AMCOM
Aviation and Missile Command

AMCSS
Army Military Clothing Sales Store

AMSAA
Army Materiel System Analysis Activity

AMSDL
Acquisition Management System and Data Requirements Control List

AO
Action Officer

AoA
Analysis of Alternatives

AODC
Action Officer Development Course

APB
Acquisition Program Baseline

APBI
Advanced Planning Briefing to Industry

APC
Acquisition Position Category

APCS
Acquisition Position Certification Standard

APMC
Advanced Program Management Course

AQAP
Allied Quality Assurance Publication

AQL
Acceptable Quantity Level

AR
Army Regulation or Acquisition Reform

ARC
Army Research Center

ARL
Army Research Laboratory

ARMP
Allied Reliability and Maintenance Publication

ARO

Army Research Organization or Acquisition Reform Office

ARTEP

Army Training and Evaluation Program

AS

Acquisition Strategy

ASA(ALT)/OASA(ALT)

Assistant Secretary of the Army (Acquisition, Logistics and Technology)/Office of the ASA(ALT) (Formally ASA(RDA).)

ASA(FM&C)/OASA(FM&C)

Assistant Secretary of the Army (Financial Management and Comptroller)/Office of the ASA(FM&C)

ASA(IE)/OASA(IE)

Assistant Secretary of the Army (Installations and Environment)/Office of the ASA(IE) (Formally ASA(IL&E).)

ASA(IL&E) /OASA(IL&E)

Assistant Secretary of the Army (Installations, Logistics, and Environment)/Office of the ASA(IL&E) (Now ASA(IE).)

ASA(M&RA)/OASA(M&RA)

Assistant Secretary of the Army (Manpower and Reserve Affairs) / Office of the ASA(M&RA)

ASA(RDA)/OASA(RDA)

Assistant Secretary of the Army (Research, Development, and Acquisition)/Office of the ASA(RDA) (Now ASA(ALT).)

ASARC

Army Systems Acquisition Review Council

ASD(C3I)/OASD(C3I)

Assistant Secretary of Defense (Command, Control, Communications and Intelligence)/Office of the ASD(C3I)

ASEO

Army Systems Engineering Office

ASIOE

Associated Support Items Of Equipment

ASPO

Acquisition Systems Protection Office

ASTMP

Army Science and Technology Master Plan

ASTWG

Army Science and Technology Working Group

ATA

Army Technical Architecture (New term is Joint Technical Architecture-Army)

ATD

Advanced Technology Demonstration

ATDN

Advanced Technology Demonstration Nomination

ATDP
Army Technology Demonstration Plan

ATRRS
Army Training Resource Requirements System

AUB
Army Uniform Board

AUO&SC
Average Unit Operations and Sustainment Cost

AUPC
Average Unit Production Cost

AWE
Advanced Warfighting Experiment

AWPDS
Acquisition Workforce Position Data Sheet

AWSS
Acquisition Workforce Support Specialist

BAA
Broad Agency Announcement

BCE
Base-Level Commercial Equipment

BES
Budget Estimate Submit

BIT
Built-In-Test

BLE
Battle Lab Experiment

BLEP
Battle Lab Experimentation Plan

BOD
Battle Lab Board Of Directors

BOI
Basis Of Issue

BOIP
Basis Of Issue Plan

BOIPFD
Basis Of Issue Plan Feeder Data

C/SSR
Cost/Schedule Status Report

C3I
Command, Control, Communications, and Intelligence

C4I
Command, Control, Communications, Computers, and Intelligence

C4ISR
Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance

CA
Corrective Action

CAB
Cost Analysis Brief

CACM
Civilian Acquisition Career Model

CAD
Computer Aided Design

CAE
Computer Aided Engineering

CAIG
Cost Analysis Improvement Group

CAIV
Cost as a Independent Variable

CALS
Continuous Acquisition and Life-Cycle Support

CALSIP
Continuous Acquisition and Life-Cycle Support Implementation Plan

CAMB
Civilian Acquisition Management Branch

CaNDI
Commercial and Non-Developmental Items

CAP
Critical Acquisition Position

CAPL
Civilian Acquisition Position List

CAPS
Conventional Armament Planning System

CARD
Cost Analysis Requirements Description

CARDS
Catalog of Approved Requirements Documents

CARS
Consolidated Acquisition Reporting System

CBD
Commerce Business Daily

CBTDEV
Combat Developer

CCA
Component Cost Analysis

CCAS
Contribution-based Compensation Appraisal System

CCB
Configuration Control Board

CCDR
Contractor Cost Data Reporting

CDG
Competitive Development Group

CDR
Critical Design Review

CDRL
Contract Data Requirements List

CE
Concept Exploration or (Acquisition) Corps Eligible Program

CE&D
Concept Exploration And Development

CEAC
Cost and Economic Analysis Center

CECOM
Communications and Electronics Command

CECOM SEC
CECOM Software Engineering Center

CEP
Concept Evaluation Plan or Concept Experimentation Program

CFC
Chloroflurocarbons

CFE
Contractor Furnished Equipment

CFF
Central Funding and Fielding

CFSR
Contract Funds Status Report

CG
Commanding General

CI
Configuration Item or Counterintelligence

CICA
Competition In Contracting Act

CIE
Clothing and Individual Equipment

CINC
Commander-In-Chief

CIO
Chief Information Officer

CITIS
Contractor Integrated Technical Information Services

CM
Configuration Management

CMI
Configuration Management Item

CMM
Capability Maturity Model

CMP
Configuration Management Plan

CNAD
Conference of National Armaments Directors

CNP
Candidate Nomination Proposal

COE
Chief of Engineers

COIC
Critical Operational Issues and Criteria

CON
Contingency (Type Classification)

CONOPS
Continuity of Operations

CONUS
Continental United States

COSSI
Commercial Operations and Support Savings Initiative

COTS
Commercial Of The Shelf

CP
Career Program

CPAC
Civilian Personnel Advisory Center

CPC
Corrosion Prevention and Control

CPI
Critical Program Information

CPIPT
Cost Performance Integrated Process/Product Team

Cpk
Process Performance Indices

CPOC
Civilian Personnel Operations Center

CPR
Cost Performance Report

CPS
Cost-Performance-Schedule

CRB
Cost Review Board

CRBSO
Cost Review Board Support Office

CRD
Capstone Requirement Document

CRLCMP
Computer Resource Life Cycle Management Plan

CSA
Chief of Staff, Army

CSRS
Civil Service Retirement System

CSWG
Crew Station Working Group

CTA
Common Table of Allowances

CTU
Consolidated Table Of Equipment Update

D&O TSP
Doctrine and Organizational Test Support Package

DA
Department of the Army

DA&E
Director, Assessment And Evaluation

DAB
Defense Acquisition Board

DACM
Director, Acquisition Career Management

DAD
Defense Acquisition Deskbook

DAE
Defense Acquisition Executive

DAES
Defense Acquisition Executive Summary

DALA
Defense Ammunition Logistics Activity

DASA
Deputy Assistant Secretary of the Army

DASA(P)
Deputy Assistant Secretary of the Army (Procurement)

DASC
Department of the Army System Coordinator

DASP
Defense Acquisition Scholarship Program

DAS(R&T)
Deputy Assistant Secretary for Research and Technology

DAU
Defense Acquisition University

DAWIA
Defense Acquisition Workforce Improvement Act

DACADS
Department of the Army Civilian Announcement Distribution System

DCSCD
Deputy Chief of Staff for Combat Developments (TRADOC)

DCSDOC
Deputy Chief of Staff for Doctrine (TRADOC)

DCSINT/ODCSINT
Deputy Chief of Staff for Intelligence / Office of the DCSINT

DCSLOG/ODCSLOG
Deputy Chief of Staff for Logistics / Office of the DCSLOG

DCSOPS/ODCSOPS
Deputy Chief of Staff for Operations and Plans / Office of the DCSOPS

DCSPER/ODCSPER
Deputy Chief of Staff for Personnel / Office of the DCSPER

DCST
Deputy Chief of Staff for Training (TRADOC)

DDACM
Deputy Director, Acquisition Career Management

DDEP
Defense Data Exchange Program

DDL
Disclosure Authority Letter

DED
Data Element Definition

DepSO
Department Standardization Officer (HQ AMC)

DFARS
Defense Federal Acquisition Regulations Supplement

DID

Data Item Description

DII COE

Defense Information Infrastructure Common Operating Environment

DISA

Defense Information Systems Agency

DISC4 / ODISC4

Director of Information Systems for Command, Control, Communications, and Computers

DIST

Defense Information Support Tools

DITSCAP

DoD Certification and Accreditation Process for Information Technology

DLA

Defense Logistics Agency

DLSC

Defense Logistics Service Center

DMRD

Defense Management Review Decision

DoD

Department of Defense

DoDD

Department of Defense Directive

DNRP

Defense National Relocation Program

DPG

Defense Planning Guidance

DRM

Defense Acquisition Board Readiness Meeting

DRPM

Direct Reporting Program Manager

DSA

Deputy for Systems Acquisition

DSCP

Defense Supply Center Philadelphia

DSP

Defense Standardization Program

DT

Developmental Test

DT&E

Development Test And Evaluation

DTIC

Defense Technical Information Center

DTLOMS

Doctrine, Training, Leader Development, Organizations, Materiel, Soldiers

DTP

Detailed Test Plan

DTSE&E

Director, Test System Engineer And Evaluation

DUAP

Dual-Use Applications Program

DUSA(OR)

Deputy Under Secretary of the Army (Operations Research)

E3

Electromagnetic Environmental Effects

E3RB

Electromagnetic Environmental Effects Requirements Board

EA

Economic Analysis or Environmental Analysis

EAC

Evaluation Analysis Center

EC

Electronic Commerce

ECA

Early Cooperative Analysis

ECC

Executive Communications and Control

ECM

Electronic Countermeasures

ECP

Engineering Change Proposal

ED

Engineering Development

EDOS

Effective Date Of Supply

EEO

Equal Employment Opportunity

EIR

Equipment Improvement Recommendation

EIS

Environmental Impact Statement

EM

Electromagnetic

EMA

Engineering Mitigation Alternative

EMC
Electromagnetic Compatibility

EMD
Engineering and Manufacturing Development

EME
Expected Electromagnetic Environment

EMI
Electromagnetic Interference

EMP
Electromagnetic Pulse

EMR
Electromagnetic Radiation

EMRH
Electromagnetic Radiation Hazards

EOD
Explosive Ordnance Disposal

EoD
Entry on Duty

EPP
Extended Planning Period

EQ
Environmental Quality

ERMO
Electromagnetic Radiation Operational

ESD
Electrostatic Discharge

ESH
Environment, Safety, and Health

ESS
Environmental Stress Screening

ETIPT
Environmental Technology Integrated Process/Product Team

ETTC
Environmental Technology Technical Council

EVM
Earned Value Management

EW
Electronic Warfare

FAR
Federal Acquisition Regulation

FARA
Federal Acquisition Reform Act

FAS
Functional Acquisition Specialist

FASA
Federal Acquisition Streamlining Act

FC
Functional Chief

FCA
Functional Configuration Audit

FCR
Functional Chiefs Representative

FCT
Foreign Comparative Testing

FD/SC
Failure Definition / Scoring Criteria

FDTE
Force Development Testing and Experimentation

FEA
Front-End Analysis

FEGLI
Federal Employees Group Life Insurance

FERS
Federal Employees Retirement System

FFP
Firm Fixed Price

FFRDC
Federally-Funded Research and Development Centers

FMECA
Failure Modes, Effects and Criticality Analysis

FMS
Foreign Military Sales

FOA
Field Operating Agency

FOC
Future Operational Capability

FORSCOM
Forces Command

FOT&E
Follow-On Test And Evaluation

FP
Functional Proponent

FRACAS
Failure Reporting/Analysis and Corrective Action System

FUE
First Unit Equipped

FY
Fiscal Year

FYDP
Future Year Defense Program

GCO
Government Concept of Operations

GEN
Generic (Type Classification)

GFP
Government Furnished Property

GIDEP
Government-Industry Data Exchange Program

GO
General Officer

GOSC
General Officer Steering Committee

GOTS
Government Off The Shelf

GOWG
General Officer Working Group

GPRA
Government Performance and Results Act

GSA
General Services Administration

HAMS
Hardness Assurance, Maintenance, and Survivability

HCA
Head of the Contracting Agency/Activity

HFE
Human Factors Engineering

HFEA
Human Factors Engineering Assessment

HHA
Health Hazard Assessment

HHAR
Health Hazard Assessment Report

HQ
Headquarters

HQDA
Headquarters, Department of the Army

HRED
Human Research and Engineering Directorate

HSDS
Health and Safety Data Sheet

HSI
Human Systems Integration

HTI
Horizontal Technology Integration

HTL
Hazard Tracking List

HTS
Hazard Tracking System

IA
International Agreement

IAW
In Accordance With

ICE
Independent Cost Estimate

ICP
Inventory Control Point

ICT
Integrated Concept Team

IDE
Integrated Data Environment

IDP
Individual Development Plan

IEP
Independent Evaluation Plan (New term is System Evaluation Plan)

IETM
Interactive Electronic Technical Manual

IHHAR
Initial Health Hazards Assessment Report

IIPT
Integrating Integrated Process/Product Team

ILS
Integrated Logistics Support

ILSM
Integrated Logistics Support Manager

ILSP
Integrated Logistics Support Plan (New term is Supportability Strategy)

IM
Item Manager or Insensitive Munitions

IMA
Independent Medical Assessor

IME
International Materiel Division

IMP
Integrated Master Plan

IMPRINT
Hardware versus Manpower

IMS
Integrated Master Schedule

IMS&A
Insensitive Munitions / Unplanned Stimuli Strategy and Assessment

INSCOM
Intelligence and Security Command

IOC
Initial Operational Capability or Industrial Operations Command

IOE/A
Independent Operational Evaluator / Assessor

IOTE
Initial Operational Test and Evaluation

IPA
Integrated Program Assessment

IPP
Industrial Preparedness and Planning

IPPD
Integrated Product and Process Development

IPPM
Integrated Product and Process Management

IPR
In-Progress Review

IPS
Integrated Program Summary

IPT
Integrated Process/Product Team

IR&D
Independent Research and Development

ISA
Independent Safety Assessment

ISO
International Organization for Standardization

ISSA
Intra-Service Support Agreement

IT
Information Technology

ITE
Integrated Test and Evaluation

ITMRA
Information Technology Management Reform Act

IT OIPT
Information Technology Overarching Integrated Product Team

ITU
International Telecommunications

JCALS
Joint Computer-Aided Acquisition and Logistics Support

JLC
Joint Logistics Commander

JROC
Joint Requirements Oversight Council

JTA
Joint Table of Allowances or Joint Technical Architecture

JTA-A
Joint Technical Architecture—Army (formally Army Technical Architecture)

JWG
Joint Working Group

KPP
Key Performance Parameter

LCC
Life Cycle Cost or Logistics Control Code

LCCE
Life Cycle Cost Estimate

LCCS
Life Cycle Contractor Support

LCM
Life Cycle Management

LCSEC
Life Cycle Software Engineering Center

LD
Logistics Demonstration

LE
Lightning Effects

LFT&E
Live Fire Test And Evaluation

LIN
Line Item Number

LMI
Logistics Management Information

LNO
Liaison Officer

LOGSA
Logistics Support Activity

LOTS
Logistics-Over-The-Shore

LP
Limited Procurement (Type Classification)

LRIP
Low Rate Initial Production

LRP
Low Rate Production (Type Classification)

LRRDAP
Long-Range Research, Development, and Acquisition Plan

LSA
Lead Standardization Activities

LSAR
Logistics Support Analysis Record (New term is Logistics Management Information)

M&S
Modeling And Simulation

MA
Managing Activities

MAA
Mission Area Analysis

MACOM
Major Army Command

MAIS
Major Automated Information System

MAISRC
Major Automated Information System Review Council (Replaced by IT OIPT.)

MAM
Materiel Acquisition Management Course

MAMP
Mission Area Materiel Plans

MANPRINT
Manpower and Personnel Integration

MAPL
Military Acquisition Position List

MAPP
Manpower and Personnel Plan

MARKS
Modern Army Record Keeping System

MATDEV
Materiel Developer

MDA
Milestone Decision Authority

MDAP
Major Defense Acquisition Program

MDCI
Multidiscipline Counterintelligence

MDEP
Management Decision Package

MDR
Milestone Decision Review

MDS
Model, Design, Series

ME
Manpower Estimate

MEDCOM
Medical Command

MFP
Materiel Fielding Plan

MI
Market Investigation

MILDEP
Military Deputy

MIL-HDBK
Military Handbook

MIL-STD
Military Standard

MIPS
Modified Integrated Program Summary

MJWG
Manpower and Personnel Integration (MANPRINT) Joint Working Group

MNS
Mission Need Statement

MOA
Memorandum Of Agreement

MOD
Modification

MOE
Measure Of Effectiveness

MOI
Memorandum Of Instruction

MON
Memorandum Of Notification

MOP
Measure Of Performance

MOS
Military Occupational Specialty

MOU
Memorandum Of Understanding

MP
Mission Profile

MPT
Manpower, Personnel and Training

MRRB
Materiel Release Review Board

MS
Milestone or Market Surveillance

MS&T
Manufacturing Science and Technology

MSC
Major Subordinate Command

MSO
Materiel Status Office

MSR
Materiel Status Record

MSS
Matrix Security Support

MTHA
Munitions Threat Hazard Assessment

MTMC
Military Traffic Management Command

MTMCTEA
Military Traffic Management Command Transportation Engineering Agency

MTOE
Modified Table of Organization and Equipment

MTS
Modernization Through Spares

MVAP
Munition Vulnerability Assessment Panel

MWO
Modification Work Order

NAAG
North Atlantic Treaty Organization Army Armaments Group

NAS
National Aerospace Standard

NATO
North Atlantic Treaty Organization

NBC
Nuclear, Biological, and Chemical

NCR
National Capital Region

NDI
Non-Developmental Item

NEPA
National Environmental Policy Act

NET
New Equipment Training

NETP
New Equipment Training Plan

NIST
National Institute of Science and Technology

NRC
Nuclear Regulatory Commission

NSA
National Security Agency

NSN
National Stock Number

NSS
National Security System

NSTD
Non-System Training Device

O&S
Operations And Support

OA
Operational Architecture

OBS
Obsolete (Type Classification)

OCIE
Organizational Clothing and Individual Equipment

OICP
Office of the International Cooperative Program

OIPT
Overarching Integrated Process/Product Team

OMA
Operations and Maintenance, Army (Funding)

OMB
Office of Management and Budget

OMS
Operational Mode Summary

OPM
Office of Personnel Management

OPP
Operational Performance Parameter

OPTEC
Operational Test and Evaluation Command

OPTEMPO
Operating Tempo

OR
Operations Research

ORB
Officer Record Brief

ORD
Operational Requirements Document

OSD
Office of the Secretary of Defense

OSHA
Occupational Safety and Health Administration

OSMIS
Operating and Support Management Information System

OST
Operations Support Team

OT
Operational Test

OT&E
Operational Test And Evaluation

OTP
Outline Test Plan

OTRS
Operational Test Readiness Statements

P3I
Pre-Planned Product Improvement

PA&E
Program Analysis and Evaluation

PAED
Program Analysis and Evaluation Directorate

PAM
Pamphlet

PAT
Process Action Team

PBBE
Performance Based Business Environment

PBC
Program Budget Committee

PC
Position Category

PCA
Physical Configuration Audit

PCO
Procurement Contracting Officer

PCS
Permanent Change of Station

PD
Project Director

PDRR
Program Definition and Risk Reduction

PE
Program Element (Funding)

PEO
Program Executive Officer

PEP
Production Engineering and Planning

PERMISS
Personnel Management Information Systems

PERSCOM
U.S. Total Army Personnel Command

PFTEA
Post-Fielding Training Effectiveness Analysis

PHA
Preliminary Hazard Analysis

PHL
Preliminary Hazard List

PIP
Product Improvement Program

PM
Program/Project/Product Manager

PM-S(DR)
Project Manager—Soldier

PMA
Procedural Mitigation Alternatives

PMO
Program/Project/Product Manager Office

PO
Proponency Officer

POC
Point Of Contact

POE
Program Office Estimate

PoF
Physics of Failure

POM
Program Objective Memorandum

POP
Proof Of Principle

PPBES
Planning, Programming, Budgeting and Execution System

PPP
Program Protection Plan or Priority Placement Program

PPS
Program Protection Survey

PQT
Production Qualification Test

PR
Program Review

PRA
Paperwork Reduction Act

PROC
Procurement (Funding)

PRR
Production Readiness Review

PSM
Practical Software Measurement

PST
Production Special Tool

PSTE
Production Special Test Equipment

PVT
Production Verification Test

QA
Quality Assurance

QAF
Quality Achievement Factor

QALI
Quality Assurance Letter of Instruction

QDR
Quality Deficiency Report

QQPRI
Qualitative and Quantitative Personnel Requirements Information

R&D
Research and Development

R&M
Reliability and Maintainability

RAC
Risk Assessment Code

RAPL
Reserve Acquisition Position List

RCM
Reliability Centered Maintenance

RDA
Research, Development, and Acquisition or Research Development Activity

RDAISA
Research, Development, and Acquisition Information Systems Activity

RDEC
Research, Development and Engineering Center

RDTE
Research, Development, Test, and Evaluation

RFP
Request For Proposal

ROI
Return On Investment

S&T
Science and Technology

SA
Support Analysis

SAALT
Assistant Secretary of the Army for Acquisition, Logistics and Technology

SAAM
Special Assignment Airlift Mission

SABP
Software Acquisition Best Practice

SACMM
Software Acquisition Capabilities Maturity Model

SAO

Staff Action Officer

SAP

Special Access Program

SAR

Selected Acquisition Report or Safety Assessment Report

SAAL-RP

Director, Acquisition Policy, Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology)

SAAL-ZBA

Army System Acquisition Review Council Executive Secretary, Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology)

SAAL-ZD

Deputy for Program Analysis and International Cooperation, Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology)

SAAL-ZP

Deputy Assistant Secretary of the Army for Procurement, Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology)

SAAL-ZS

Deputy for Systems Management & Horizontal Technology Integration, Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology)

SAAL-ZT

Deputy Assistant Secretary of the Army (Research and Technology), Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology)

SAT

Situation Assessment Team

SB

Standard Bulletin

SBIR

Small Business Innovative Research

SCE

Software Capability Evaluation

SCG

Security Classification Guide

SCM

Security Countermeasures

SDP

Software Development Plan

SE

Standardization Executives

SEM

Systems, Equipment, and Munitions

SEP

System Evaluation Plan

SER
System Evaluation Report

SES
Senior Executive Service member

SHDS
Safety and Health Data Sheet

SI
System Integrator

SIE
Standards Improvement Executive (HQ AMC)

SIP
System Improvement Package

SIPT
Supportability Integrated Process/Product Team

SKO
Sets, Kits, and Outfits

SLAD
Survivability/Lethality Analysis Directorate

SLIN
Standard Line Item Number

SMA
Standardization Management Activities

SMDC
Space and Missile Defense Command

SME
Subject Matter Expert

SMMP
System Manpower and Personnel Integration (MANPRINT) Management Plan

SMR
Source Maintenance and Recoverability

SOO
Statement of Objectives

SOW
Statement Of Work

SPC
Statistical Process Control

SPMN
Software Program Managers Network

SRO
System Readiness Objective

SRP
Supply Request Package

SRPE

Senior Rater Potential Evaluation

SS

Supportability Strategy

SSCOM

Soldier Systems Command

SSCOM IMMC SSD

Soldier Systems Command Integrated Materiel Management Center Soldier Systems Directorate

SSEB

Source Selection Evaluation Board

SSG

Special Study Group

SSMP

System Safety Management Plan or System Security Management Plan

SSN

Standard Study Number (Funding)

SSOI

Summary Statement Of Intent

SSP

Source Selection Plan (Contracting) or Simulation Support Plan (Modeling and Simulation) or System Support Package (Testing)

SSR

Supply Support Request

SSRA

System Safety Risk Assessment

SSWG

System Safety Working Group

STAR

System Threat Assessment Report

STD

Standard (Type Classification)

STF

Special Task Force

STO

Science and Technology Objective

STRAP

Systems Training Plan

STTE

Special Tools and Test Equipment

STTR

Small Business Technology Transfer

SW IPT
Software Integrated Process/Product Team

T&E
Test and Evaluation

TA
Transportability Approval or Threat Assessment

TA/CP
Threat Assessment and Control Plan

TAADS
The Army Authorization Document System

TAAF
Test Analysis And Fix

TADSS
Training Aids, Devices, Simulations, and Simulators

TAFIM
Technical Architecture For Information Management

TAPC
U.S. Total Army Personnel Command

TAPES
Total Army Personnel Evaluation System

TBP
To Be Published

TC
Type Classification

TDA
Table of Distribution and Allowances

TDP
Technical Data Package

TDY
Temporary Duty

TEA
Transportability Engineer Analysis

TECO
Test and Evaluation Coordination Officer

TECOM
Test and Evaluation Command

TEMP
Test and Evaluation Master Plan

THA
Threat Hazard Assessment

TIM
Technical Integration Manager

TIPT
Test Integrated Process/Product Team

TIWG
Test Integration Working Group

TMDE
Test Measurement and Diagnostic Equipment

TNGDEV
Training Developer

TOA
Trade-Off Analysis

TOE
Table of Organization and Equipment

TOP
Test Operating Procedures

TPF
Total Package Fielding

TPIO
TRADOC Program Integration Office

TR
Transportability Report

TRAC
Training and Doctrine Command (TRADOC) Analysis Center

TRADOC
Training and Doctrine Command

TSARC
Test Systems Acquisition Review Council

TSG / OTSG
The Surgeon General / Office of the TSG

TSM
Training and Doctrine Command (TRADOC) Systems Manager

TSP
Training and Doctrine Command (TRADOC) Study Program or Thrift Savings Plan

TSR
Training Support Requirements

TSWG
Technology Safety Working Group

TT
Technology Team

TWI
Training with Industry

U.S.C.
United States Code

UAV
Unmanned Aerial Vehicle

UCR
Unit Cost Reports

UIC
Unit Identification Code

UP
Unsolicited Proposal

UPERC
Unsolicited Proposal Evaluation Review Council

UPS
Unplanned Stimuli

USACHPPM
U.S. Army Center for Health Promotion and Preventive Medicine

USAFMSA
U.S. Army Force Management Support Agency

USAMEDCOM
U.S. Army Medical Command

USAMMA
U.S. Army Medical Materiel Agency

USAMRDC
U.S. Army Medical Research and Development Command

USANCA
U.S. Army Nuclear and Chemical Agency

USASC
U.S. Army Safety Center

USD(A&T)
Under Secretary of Defense (Acquisition and Technology)

USMC
U.S. Marine Corps

VAMOSC
Visibility and Management of Operating and Support Costs

VCJCS
Vice Chairman of the Joint Chiefs of Staff

VCSA
Vice Chief of Staff of the Army

VDISC4
Vice Director of Information Systems for Command, Control, Communications, and Computers

VE
Value Engineering

VECP
Value Engineering Change Proposal

VEI
Value Engineering Incentive

VEP
Value Engineering Proposal

VEM
Value Engineering Manager

VEPR
Value Engineering Program Requirement

WBS
Work Breakdown Structure

WCNMA
Warnings, Cautions, and Notes Mitigation Alternative

WFLA
Warfighting Lens Analysis

WIPT
Working-Level Integrated Process/Product Team

WRAP
Warfighter Rapid Acquisition Program

Y2K
Year 2000

ZLIN
Development Line Item Number